



GAINING  
COSTS

LOSING  
TIME

2011 SPECIAL REPORT:  
*The Obesity Crisis in Texas*



**Susan Combs** Texas Comptroller of Public Accounts

# GAINING COSTS, LOSING TIME:

## **The Obesity Crisis in Texas**

---

*Susan Combs • Texas Comptroller of Public Accounts*

February 4, 2011

Ladies and Gentlemen:

Throughout my career, I have advocated for the well-being of our children. One of the greatest threats to our children's future is the growing trend of childhood obesity. Unhealthy children often become unhealthy adults. Since 2003, I've led efforts to change government policies and to raise public awareness of the human and financial costs of obesity. As Comptroller, I am committed to ensuring that we have a healthy work force to support Texas' economic vitality and growth.

This report updates a 2007 Comptroller report outlining the cost of obesity to Texas businesses and provides strong recommendations to address the state's obesity crisis on all levels: in our schools, businesses and communities.

The number of Texans who are overweight or obese continues to grow, accounting for a significant jump in the costs borne by Texas employers. Today, 66.7 percent of adult Texans are overweight or obese, up from 64.1 percent in 2005.

The rising cost of treating obesity-related diseases and an aging population with higher rates of obesity also have increased the Comptroller's estimate of obesity costs to Texas businesses. Our updated estimates put obesity-related costs for Texas businesses at *\$9.5 billion in 2009*. Left unchecked, *obesity could cost employers \$32.5 billion annually by 2030*. These costs consume a growing share of economic output that could otherwise support more productive activities. Obesity-related costs also contribute to rising health care and insurance costs that have forced some Texas employers to reduce insurance coverage.

This is a battle we cannot afford to lose.

The importance of maintaining a healthy lifestyle is something I experience first-hand on my family ranch in West Texas. On the ranch, you have to be fit and healthy to survive. If your car breaks down or runs out of gas, you might have to walk 10 miles or more to the nearest farm for help.

The fight to curb obesity has important implications for all Texans, from their wallets to their personal health. The magnitude of the challenge requires an equally bold response. Our efforts will require us to consider and *challenge* the way we live, and the importance we place on a healthy lifestyle.

Sincerely,

Susan Combs



# TABLE OF CONTENTS

<b>Obesity: The Cost of Doing Nothing.....</b>	<b>1</b>
<b>Introduction.....</b>	<b>3</b>
<b>Recommendations.....</b>	<b>5</b>
School Health and Physical Education .....	5
Community and Governmental Services.....	7
Texas Businesses.....	8
<b>The Obesity Epidemic.....</b>	<b>9</b>
It Starts in Childhood .....	9
The Demographics of Obesity.....	10
<b>The Cost of Obesity.....</b>	<b>17</b>
Employer Costs .....	17
What Lies Ahead?.....	21
<b>Worksite Wellness Programs.....</b>	<b>23</b>
Return on Investment.....	23
Program Design and Development.....	23
Successful Wellness Programs .....	24
<b>Reducing Childhood Obesity .....</b>	<b>31</b>
A National School Nutrition Policy.....	31
“Competitive Foods” .....	31
Texas Takes On Obesity.....	32
Other Texas Initiatives .....	33
Academic Efforts .....	34
<b>Endnotes.....</b>	<b>39</b>



# OBESITY: THE COST OF DOING NOTHING

According to Healthy Kinder, Inc., an organization dedicated to promoting healthy lifestyles for children, the average lifetime cost of obesity is high – over half a million dollars for an obese child who remains obese throughout adulthood:

Shorter lifespan	\$234,240
Cardiovascular disease	10,521
Cancer	1,794
Diabetes	3,482
Arthritis	1,871
Lower wages	291,214
Diet programs and gym memberships	6,603
<b>Grand Total</b>	<b>\$532,057</b>

Source: <http://www.healthykinderkids.org/Cost-of-Obesity.html>

## ADULT OBESITY

- In 2009, there were 2.4 million more obese adults in America than in 2007. 63.2 percent of U.S. adults were obese or overweight in 2009.
- In 2009, the state achieved the unhealthy distinction of having **two-thirds (66.7 percent) of all adult Texans overweight or obese, with 29.5 percent obese** and 37.2 percent overweight. Only 33.1 percent of adult Texans were of a normal weight.
- The prevalence of obese Texas adults more than doubled in the last two decades, from 12.3 percent in 1990 to 29.5 percent in 2009.<sup>1</sup>



## CHILDHOOD OBESITY

- From 1980 to now, the rate of obesity among U.S. children and adolescents tripled.
- **20.4 percent** of Texas children aged 10 to 17 are obese, compared to 16.4 percent of U.S. children.
- Texas tied with Arkansas in 2007 for seventh place among states in its share of children who are obese.
- Obese kids have an 80 percent chance of staying obese their entire lives.<sup>2</sup>

## HEALTH COSTS OF OBESITY AND COSTS TO EMPLOYERS

- U.S. health care costs due to obesity doubled in less than a decade and account for 9.1 percent of annual health costs, or \$147 billion.
- Average health care spending for obese individuals was \$1,429 or 41.5 percent higher than that of normal-weight persons in 2006.
- Obesity accounts for 12.9 percent of private insurer costs.
- Obesity is now the leading cause of premature heart attacks.
- Individuals with a BMI greater than 35 represent 37 percent of the population but account for 61 percent of the costs due to excess weight.
- **Obesity cost Texas businesses \$9.5 billion in 2009.**<sup>3</sup>

- A recent study of IBM's self-insured program showed 2008 average per capita health insurance claims for obese children were \$2,907, compared to \$1,640 for non-obese children. Children with type 2 diabetes had average claims of \$10,789. The study found that hospitalization rates for obese children with chronic health conditions were up to 2.9 times higher than for non-obese children with no chronic conditions.<sup>4</sup>
- Obesity could cost Texas businesses **\$32.5 billion annually** by 2030, if current trends in obesity and health care costs continue.
- Wellspring Camps, a weight loss camp with several locations in the U.S., estimates that an obese 18-year old that remains obese throughout adulthood can expect to spend approximately \$550,000 in obesity related health costs during his or her lifetime.<sup>5</sup>

## HEALTH CARE INDUSTRY

Hospitals are facing added costs to be able to accommodate and treat larger patients. Examples:

- stretchers, wheelchairs, blood pressure cuffs, hospital gowns, beds, diagnostic equipment such as MRI machines, and doorways all can be too small to accommodate obese patients.
- more medical personnel are needed to move and assist patients; also more personnel needed for surgeries.
- medical personnel can find it difficult to locate airways to insert a breathing tube.
- multiple surgeries can be needed for procedures such as wound closure that could be done all at once for a non-obese person.<sup>6</sup>

## TRANSPORTATION INDUSTRY

- The U.S. airline industry consumes 350 million more gallons of fuel at an extra cost of \$275 million annually due to an increase in the average weight of passengers.<sup>7</sup>
- One study found that passenger weight gain accounted for an additional one billion gallons of fuel consumed per year between 1960 and 2002.<sup>8</sup>

**Obesity could cost Texas businesses \$32.5 billion annually by 2030, if current trends in obesity and health care costs continue.**

## IMPACT ON VARIOUS INDUSTRIES

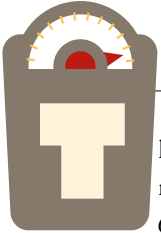
Manufacturers are adjusting and refitting the size of their products due to a growing overweight population. Some affected industries include:

- clothing for children and adults.
- furniture for homes, schools and offices.
- public seating for sports arenas, theaters, classrooms, churches, and restaurants.
- bathroom fixtures such as toilet seats, showers, and bathtubs.
- cemetery supplies including caskets, hearses and plots.





# INTRODUCTION



The Comptroller's 2007 report *Counting Costs and Calories: Measuring the Cost*

*of Obesity to Texas Employers* examined the financial impact of obesity on Texas employers — and found it to be significant. Since then, the situation has only worsened. Obesity is an increasingly common and increasingly serious malady in Texas.

In 2009, 29.5 percent of all Texas adults were clinically obese, well ahead of the national rate of 27.1 percent.<sup>9</sup> In the same year, *two-thirds* of all adult Texans were overweight or obese.

Texas employers pay a high price for the obesity epidemic. The Comptroller's 2007 study estimated the costs to Texas businesses associated with obesity-related health care, absenteeism, disability and decreased productivity at \$3.3 billion annually. **According to new estimates, that amount has almost tripled, to \$9.5 billion in 2009.**

The Texas state demographer projects that, if current trends continue at the pace of the last 10 years, by 2030 36.7 percent of Texas adults will be obese, 36.4 percent will be overweight and only 26.9 percent will be at normal weight.<sup>10</sup> **New Comptroller estimates show that obesity could cost Texas businesses \$32.5 billion annually by 2030.**

Obesity also is a factor in the rising cost of health care and insurance. About 9.1 percent of all U.S. medical spending and nearly 13 percent of all private insurance spending can be attributed to obesity.<sup>11</sup>

In recognition of obesity's impact on the workplace and the bottom line, many companies have started employee health and wellness programs to reduce absenteeism, lower insurance costs and improve productivity and morale. These programs produce a positive return on the investment needed to create them.<sup>12</sup>

Governments at the federal, state and local levels also are taking action, and Texas has become a national leader in this fight. It was among the first states to set nutritional standards for school lunches, breakfasts and snacks that exceed the federal standards, and to set standards for foods sold in school à la carte lines, stores and vending machines. In addition, physical education programs in Texas schools have received attention and some extra funding to work the other side of the "fewer calories, more activity" equation.







# RECOMMENDATIONS



## SCHOOL HEALTH AND PHYSICAL EDUCATION

### 1. Allow TEA to use student-level FitnessGram data to assess the relationship between physical fitness and academic performance.

- TEA should share encrypted student-level FitnessGram data with the Comptroller so that it can be integrated with other student and community data to identify areas within school districts appropriate for intervention grants.
- The Comptroller would partner with individual districts to obtain other specific data to be used in the GIS-based analysis.
- Schools could integrate student FitnessGram data with TAKS academic achievement, absenteeism, demographic and student Zip code data.
- If FitnessGram results are linked with other PEIMS data, TEA could correlate fitness data with academic data and make them available to parents.

### 2. Partner with the private sector, federal legislators, associations and other advocates to develop strategies to promote healthy eating and physical activity.

- Launch an obesity and wellness information portal on the Comptroller's website to provide a clearinghouse of information and resources to children, parents, schools, businesses, state agencies and the general public.
- Work with the food, beverage, media and entertainment industries to promote healthy foods and drinks marketed to children, particularly during prime TV viewing time for children.
- Work with School Health Advisory Committees (SHACs) to disseminate information and best practices in obesity prevention to schools.



All providers receiving grants would be required to collect and provide data measuring the **results** of their programs.

The **FitnessGram**,  
a physical fitness test,  
has revealed that fitness  
levels decline as  
students get older.

3. **Recognize schools for achievements and improvements made in health, fitness and wellness.**
  - Implement a School Wellness Awards program rewarding schools with innovative and effective nutrition and fitness programs.
  - Potential categories for wellness awards include school meals, physical activity, nutrition education and wellness programs.
4. **Improve nutrition and physical activity in early childhood programs, including support for the use of dietary guidelines in childcare settings.**
  - Urge the state's Early Childhood Health and Nutrition Interagency Council, enacted in 2009, to draft nutrition and physical activity policies, standards and requirements for programs involving children less than six years of age and provide them to schools and parents for comment by the beginning of the 2011-12 school year.
  - The council then should finalize the draft in time to notify early childhood medical and educational program leaders by May 2012 that these policies, standards and requirements will become effective for the 2012-13 school year.
5. **The Legislature should fund intervention grants for middle schools identified as "high risk" for obesity by incorporating FitnessGram data with an obesity data system to be developed by the Comptroller's office.**
  - The Comptroller would integrate student-level FitnessGram data with student location and demographic data as well as other community data (proximity of grocery stores, fast foods, athletic fields, medical facilities, etc.) to pinpoint geographic areas within school districts and locate at-risk schools suitable for intervention grants.
  - The Comptroller would administer a competitive grant program to provide funding for proven obesity intervention and prevention programs in areas identified as "hot spots" by the agency's geographic information system (GIS). All providers receiving grants would be required to collect and provide data measuring the results of their programs.
  - The Comptroller also would develop a website to provide a clearinghouse of obesity-related information and programs to schools and families (see Recommendation #2, page 5).
6. **Urge Texas legislators to restore the high school PE graduation requirement to 1.5 credits.**
  - During the last legislative session, H.B. 3 reduced the PE credits required for graduation from 1.5 to one.
  - The FitnessGram physical fitness test has revealed that fitness levels decline as students age. For example, while 21 percent of seventh-grade girls and 17 percent of seventh-grade boys met the standard, among high school seniors only 8 percent of girls and 9 percent of boys fell into the "fit" category.

**7. Urge Texas legislators to expand middle-school physical education requirements.**

- Legislators should be urged to require physical education in all six semesters of middle school. Current law requires daily physical activity in only four out of six semesters.

**8. Encourage school districts to send parents a “fitness report card” based on FitnessGram data.**

- SHACs should work with school districts to provide a fitness report card to parents.



**COMMUNITY AND GOVERNMENTAL SERVICES**

**9. Encourage schools to make facilities available before and after school for use by the school community and community-based organizations for intramural physical activity programs.**

**10. Urge Texas senators and representatives in the U.S. Congress to propose changes to the federal Supplemental Nutrition Assistance Program (SNAP), limiting or curbing the eligibility of unhealthy food items.**

- According to the federal Food and Nutrition Act of 2008, soft drinks, candy, cookies, snack crackers, and ice cream are eligible items under SNAP.

**11. Encourage farmer’s markets to accept SNAP benefits (food stamps/Lone Star Cards) as payment.**

- Farmer’s markets promote nutrition through the purchase of locally grown fruits and vegetables, which are fresher than those transported long distances.
- Texas has a pilot program to provide farmer’s markets with wireless card readers, but many still lack the ability to accept the Lone Star Card.
- A farmer’s market must be licensed by USDA’s Food and Nutrition Services Division to become eligible to accept the SNAP card.

**12. Encourage policies in cities and counties that encourage walking and bicycling for health, transportation and recreation.**

- Students should have a safe place to exercise and play and a safe walk to school.
- Support city and county efforts to improve neighborhood safety and use healthy urban design strategies.

**13. The Cancer Prevention and Research Institute of Texas (CPRIT) should focus research grant funding on proposals that study the link between obesity and cancer, based on feedback and findings from the RFI issued in August 2010.**



Many Texas farmers  
markets still lack  
the ability to accept  
the **Lone Star Card**.



Vending machines could provide a “Red, Yellow, Green” **labeling** program for their selections



## TEXAS BUSINESSES

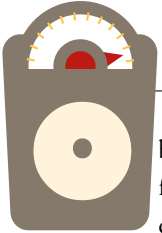
### 14. Create a task force of health care and insurance providers to determine ways in which their industries can provide obesity prevention and intervention services to patients and policyholders.

- Encourage insurance providers to reimburse members' costs for exercise classes, gym memberships and nationally recognized weight loss programs such as Weight Watchers, Jenny Craig and NutriSystem if members lose a specified amount of weight or reach goal weight within specific timeframes.
- Encourage physicians to prescribe diet and exercise as viable treatments (including weight loss programs, gym memberships, exercise classes and exercise equipment) for patients diagnosed as obese or overweight, with insurance companies covering prescribed costs accordingly.
- Encourage pediatricians to diagnose “obese” or “overweight” children according to their body mass index (BMI) and prescribe a treatment plan of diet and exercise with regular checkups on progress.

### 15. The state should encourage the restaurant industry to list calories and nutrition content on menu items.

- Calorie information should be included on menus, counter signage, websites and on customer receipts.
- Vending machines could provide a “Red, Yellow, Green” labeling program for their selections.
- Restaurants that share nutrition information effectively could be recognized or featured in some way as positive examples.

# THE OBESITY EPIDEMIC



Obesity, a major risk factor for many chronic diseases, has reached

epidemic proportions globally.<sup>13</sup> A third of the world's adult population was obese or overweight in 2005, and if current trends continue the share could reach 57.8 percent by 2030.<sup>14</sup>

The U.S. has already passed that milestone. The U.S. Centers for Disease Control and Prevention (CDC) reports that 63.2 percent of U.S. adults were obese or overweight in 2009.

And Texas is in even worse shape — **fully two-thirds of Texans (66.7 percent) are overweight or clinically obese.**<sup>15</sup>

According to the CDC, U.S. adult obesity rates rose from 11.6 percent in 1990 to 27.1 percent in 2009. In Texas, our share of adults who are obese more than doubled from 12.3 percent to 29.5 percent (**Exhibit 1**). Over the same period, the share of Texas adults at normal weight fell sharply, from 57.1 percent to just 33.1 percent, a drop of 42 percent.<sup>16</sup>

## It Starts in Childhood

Obesity has risen even faster in children than adults. According to CDC, the rate of obesity among U.S. children aged six to 11 *tripled* from 1980 to 2008, from 6.5 percent to 19.6 percent. Among adolescents aged 12 to 19, obesity rates rose *even faster*, from 5.0 percent to 18.1 percent.<sup>17</sup>

Excessive weight puts children at risk of type 2 diabetes, high blood pressure, gall-bladder disease, depression, anxiety and

lower self-esteem, while increasing their risk of chronic disease in adulthood.<sup>18</sup>

The 2007 National Survey of Children's Health (NSCH) found that **20.4 percent of Texas children** aged 10 to 17 were obese, compared to 16.4 percent for all U.S. children.<sup>19</sup>

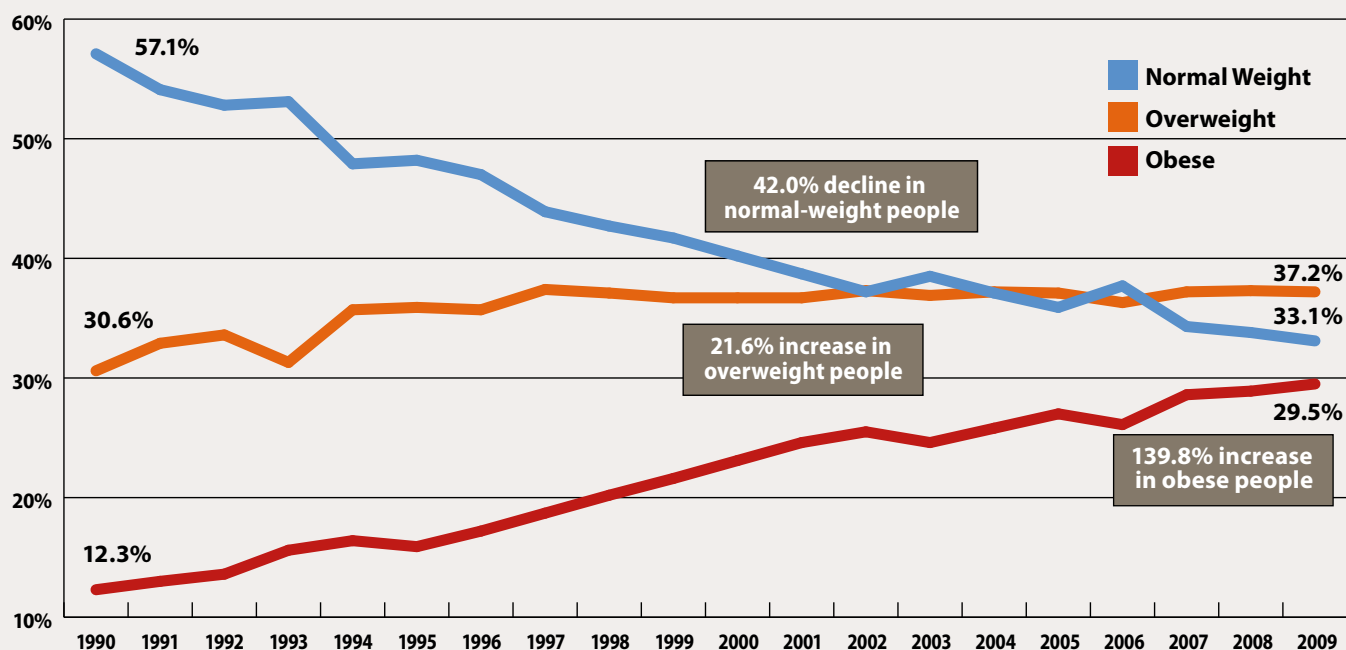
Comparing the 2007 NSCH with its 2003 predecessor yields more alarming results. The number of states with childhood obesity rates at or above 18 percent *doubled*, from six states in 2003 to 12 in 2007 (**Exhibit 4**).<sup>20</sup>





EXHIBIT 1

## Obesity Prevalence Trends In Texas Adults, 1990 to 2009



Source: U.S. Centers for Disease Control and Prevention.

### The Demographics of Obesity

The incidence of obesity has increased across the board, but is more pronounced among some groups.

#### BY AGE

Obesity rates have risen for all age groups, but the older you are, the more likely you are to be obese.

Texans aged 55 to 64 had the state's highest obesity rate in 2009, at about 33.7 percent. The 45-to-54 age group was second, at 33.6 percent. Texans aged 35 to 44 came in third-heaviest, at 31.4 percent.<sup>21</sup>

#### BY RACE/ETHNICITY

In Texas, Hispanic and black adults had the highest obesity rates in 2009, at 36.4 percent and 35.7 percent, respectively. By contrast, 25.7 percent of Texas white

THE OLDER YOU ARE,  
THE MORE LIKELY YOU ARE  
TO BE **OBESSE**

adults were obese (**Exhibit 5**).<sup>22</sup> Child obesity is more common among blacks and Hispanics as well.<sup>23</sup> And Hispanics, which are Texas' fastest-growing population group, are expected to drive obesity rates higher in future years.<sup>24</sup>

#### BY EDUCATION AND INCOME

Socioeconomic factors such as lower educational attainment and income can be correlated to obesity in adults, and to some extent in children as well.<sup>25</sup>

Studies have found that obesity is less common among people with more

education, and Texas is no exception. In 2009, Texas' college graduates were the least likely to be obese, at 22.2 percent. Texans without a high school diploma were the most likely to be obese, at 37.4 percent (**Exhibit 6**).<sup>26</sup>

The relationship between income and obesity in adults is well-established.<sup>27</sup> In 2009, Texans earning between \$15,000 and \$24,999 annually were the most likely to be obese (38.1 percent); those earning \$50,000 or more per year were least likely, at 26.3 percent.<sup>28</sup>

#### URBAN VS. RURAL

Texans living in rural counties are more likely to be obese. In 2009, Texans in rural areas — those lying outside the state's metropolitan statistical areas (MSAs) — had much higher obesity rates than city dwellers, at 34.3 percent versus 28.8 percent.<sup>29</sup>

## WHAT IS BMI?

Overweight and obesity generally are gauged through a formula called the Body Mass Index (BMI). BMI is calculated by dividing a person's weight in kilograms by their height in meters squared. People can be categorized as being underweight, at a normal weight, overweight or obese depending on their BMI (**Exhibit 2**).

BMI CAN BE **INACCURATE**  
BECAUSE IT IS OFTEN CALCULATED  
USING **SELF-REPORTED** FIGURES  
FOR HEIGHT AND WEIGHT

BMI can be inaccurate because it is often calculated using self-reported figures for height and weight; participants tend to underestimate their weight and overestimate their height. BMI calculations also have certain limitations. They do not take into account muscle mass, meaning that some people, particularly athletes, may be classified as overweight despite lacking significant amounts of body fat. Despite these drawbacks, however, BMI is generally considered to be the best tool available for weight categorization, and is used by the U.S. Centers for Disease Control and Prevention (CDC).

In children, the relationship between BMI and obesity is somewhat more complex. Like adult BMI, child BMI depends on weight and height. But BMI in children is also defined by age and gender, since a child's amount of body fat varies with these two factors. To account for differences in age and gender, the CDC has developed BMI-for-age growth charts that classify children based on how they compare with other children of their age and gender (**Exhibit 3**).<sup>30</sup>

EXHIBIT 2

### BMI Categories for Adults

BMI	WEIGHT CATEGORY
Less than 18.5	Underweight
18.5 – 24.9	Normal Weight
25.0 – 29.9	Overweight
30.0 or more	Obese

Source: U.S. Centers for Disease Control and Prevention.

EXHIBIT 3

### BMI Categories for Children

BMI PERCENTILE RANGE	WEIGHT CATEGORY
Less than the 5th percentile	Underweight
5th percentile to less than the 85th percentile	Healthy Weight
85th to less than the 95th percentile	Overweight
Equal to or greater than the 95th percentile	Obese

Source: U.S. Centers for Disease Control and Prevention.



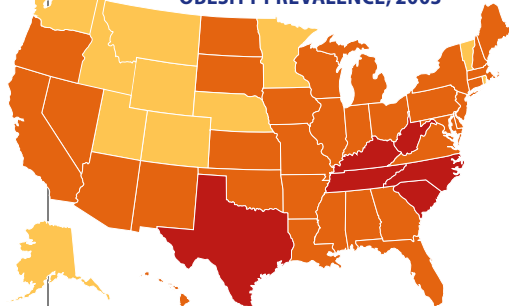
EXHIBIT 4

### Obesity and Overweight Prevalence Among Children Aged 10 to 17 by State, 2003 vs. 2007

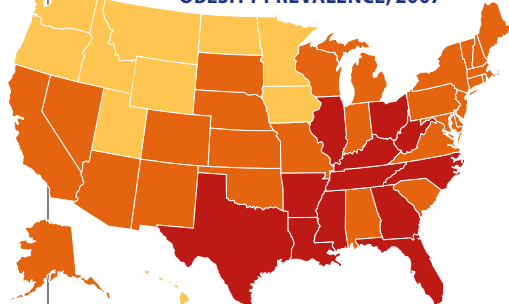
#### OBESITY PREVALENCE

< 12%    12-17.99%    ≥ 18%

#### OBESITY PREVALENCE, 2003



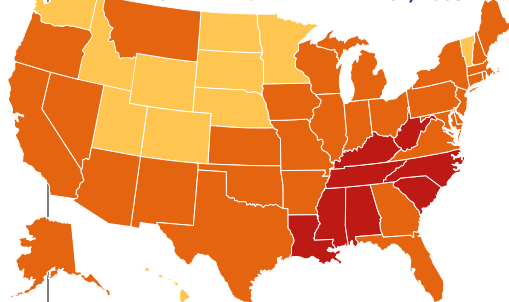
#### OBESITY PREVALENCE, 2007



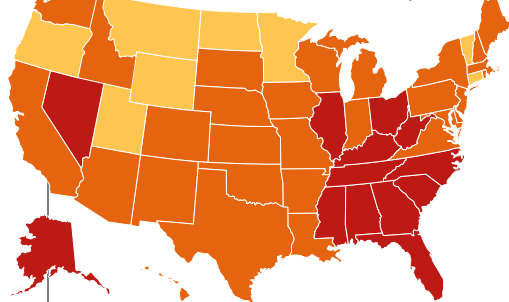
#### OVERWEIGHT PREVALENCE

< 27%    27-32.99%    ≥ 33%

#### OVERWEIGHT PREVALENCE, 2003



#### OVERWEIGHT PREVALENCE, 2007



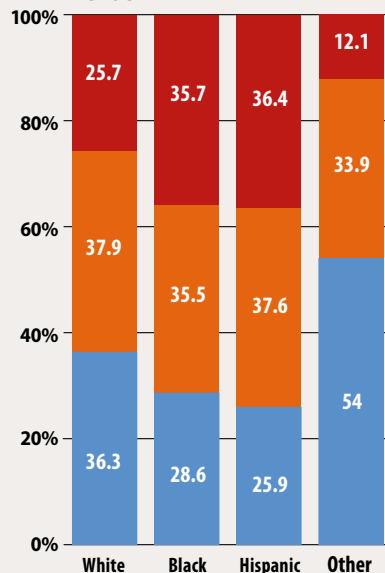
Note: The overweight category includes obese children.  
Source: National Survey of Children's Health, 2003 and 2007.

EXHIBIT 5

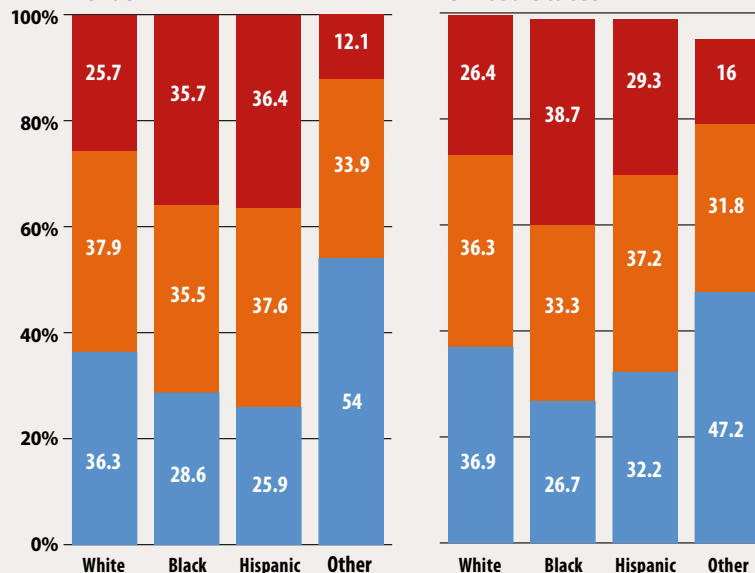
### Share of Obese, Overweight and Normal-Weight Adults by Race/Ethnicity, 2009, Texas vs. the U.S.

Normal Weight    Overweight    Obese

#### Texas



#### United States



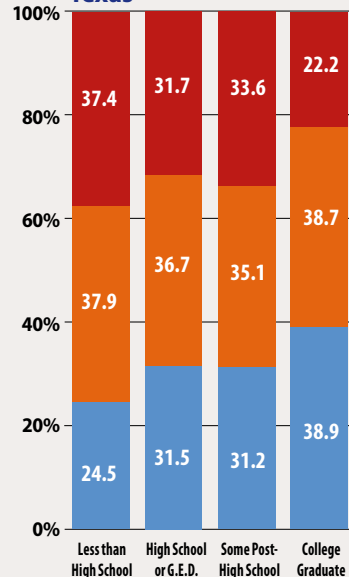
Note: Percentages may not total to 100 percent due to rounding and unreported data for some states.  
Source: U.S. Centers for Disease Control and Prevention.

EXHIBIT 6

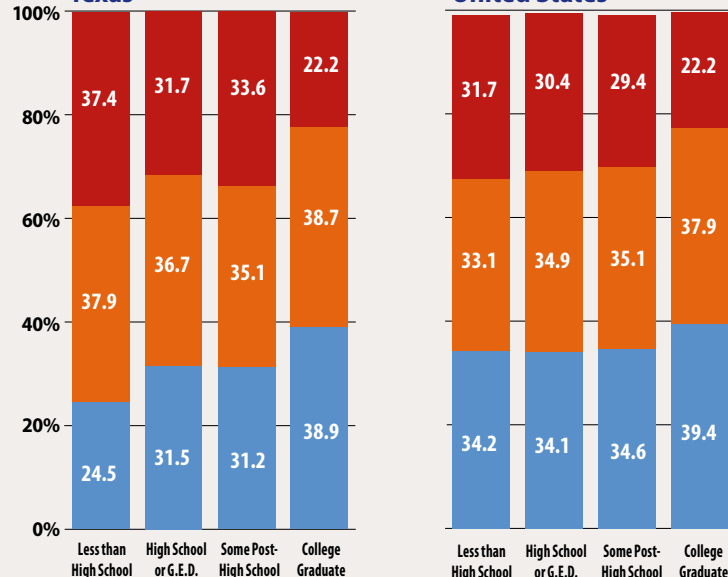
### Share of Obese, Overweight and Normal-Weight Adults by Educational Level, 2009, Texas vs. the U.S.

Normal Weight    Overweight    Obese

#### Texas



#### United States



Note: Percentages may not total to 100 percent due to rounding and unreported data for some states.  
Source: U.S. Centers for Disease Control and Prevention.

## FACTORS CONTRIBUTING TO OBESITY: **SNACKING**

**B**oth frequency of snacking and the amount of snacks consumed in the U.S. have risen over the past several decades. Between the mid-1970s and 2003 through 2006, the average time between meals or snacks shrank by one hour for both adults and children — three hours apart for adults and 3.5 hours for children — while the amount of calories consumed from snacks rose more than the caloric intake increase at meals.

The average adult consumed 470 calories from snacks each day in 2003 through 2006, up from 200 calories in the mid-1970s. The number of calories the average child consumes in the form of snacks also rose during this period, from 240 calories in the mid-1970s to 500 calories in 2003-2006.<sup>31</sup> Contributing to this caloric increase are larger portion sizes of ready-to-eat foods, which began growing in the 1970s and now exceed federal standards for serving size. In addition, the types of foods consumed during snack time have shifted away from healthier options, such as fruit, and toward chips, candy and sugary beverages.<sup>32</sup>

By the mid-1990s, children were consuming more sugar-sweetened beverages than milk. One study found that these beverages contributed 290 calories daily to an average adult diet in the 1970s versus 420 calories in 2003-2006, an increase of 45 percent. Again, portion sizes for these drinks have grown considerably.

Each additional daily serving of a sweetened drink increases a child's risk for obesity by an average of 60 percent.<sup>33</sup>

THE TYPES OF FOODS CONSUMED DURING  
SNACK TIME HAVE **SHIFTED AWAY**  
FROM HEALTHIER OPTIONS, SUCH AS FRUIT, AND  
TOWARD CHIPS, CANDY AND SUGARY BEVERAGES

EACH ADDITIONAL DAILY SERVING  
OF A SWEETENED DRINK INCREASES  
A CHILD'S **RISK** OF OBESITY  
BY AN AVERAGE OF **60 PERCENT**

Several factors fuel the trend toward unhealthy snacking. One is the wide availability of snacks at school. Vending machines at many elementary, junior high and high schools provide fatty, salty and sugary snacks. Middle school and high school students have especially easy access to them.<sup>34</sup> Children also purchase unhealthy snacks at corner stores before or after school.<sup>35</sup>



Marketing and advertising also play a role. A recent study examined television marketing of children's food, using the U.S. Department of Health and Human Services' classification system that groups foods into "go," "slow" and "whoa" categories. The study found that 72.5 percent of the ads for children marketed foods in the "whoa" group, which should be consumed only on rare occasions. Just 1 percent of all children's food commercials fit into the "go" category, which includes foods such as fruits and vegetables.<sup>36</sup>

## FACTORS CONTRIBUTING TO OBESITY: ENERGY-DENSE FOODS

**E**nergy-dense foods are a major factor driving obesity in the U.S. While the term “energy density” may sound odd when applied to foods, it should be remembered that a calorie is a unit of energy, not of weight or fat. Energy density is measured as the number of calories per gram, or the amount of energy contained in a given weight of food.

FOODS WITH LARGE AMOUNTS OF WATER AND FIBER TEND TO HAVE **LOW ENERGY DENSITIES**, AND AS SUCH ARE **LOW IN CALORIES**

Water and fiber both play a large role in determining energy density. Foods with large amounts of water and fiber, such as fruits and vegetables, tend to have low energy densities, and as such are low in calories (**Exhibit 7**). Research suggests that food volume plays a greater role in causing people to feel full than calorie intake. Because fruits and vegetables typically supply fewer calories for the same amount of volume, they can impart a feeling of fullness on far fewer calories. Individuals who want to decrease their daily calorie intakes thus can substitute fruits and vegetables for more energy-dense foods.<sup>37</sup>

A 2005 survey of fruit and vegetable consumption in the U.S., however, found that fewer than a third of U.S. adults surveyed consumed fruit at least twice per day, and only 27.2 percent consumed vegetables at least three times per day as recommended.<sup>38</sup>

EXHIBIT 7

### Energy Densities of Common Foods (calories per gram)

	
Baked chocolate chip cookies (from refrigerated dough) 4.9	French fries (fast food) 3.2
	
Pepperoni pizza (fast food) 2.8	Double, large-patty cheeseburger with condiments and vegetables (fast food) 2.7
	
Drumstick, breaded and fried (fast food) 2.7	Apple with skin 0.5
	
Orange slices 0.5	Carrots 0.4
	
Strawberries 0.3	Broccoli, raw flower clusters 0.3

Source: National Institutes of Health.

Increasing the availability and consumption of vegetables and fruits could reverse the trend towards more high-calorie, energy-dense foods in daily diets, and thus help reduce the incidence of overweight and obesity.



## FACTORS CONTRIBUTING TO OBESITY: GROWING PORTION SIZES

**A**verage portion sizes have grown substantially since the 1970s, changing people's perception of a "normal" serving and contributing to a higher prevalence of overweight and obesity. Standard serving sizes of meals and beverages today range from a **third larger to twice as large as they were 20 years ago**. At home, the size of dishware — plates, bowls and glasses — has grown by as much as 36 percent since 1960, while recipe portion sizes featured in the *Joy of Cooking* rose by up to 42 percent between 1931 and 2006.<sup>39</sup>










**Exhibit 8** shows how much portion sizes have increased.<sup>40</sup> Twenty years ago, a cup of coffee held an average of 45 calories; today, a cup of coffee with mocha syrup represents 350 calories. An individual would have to walk one hour and twenty minutes to burn the extra calories consumed from just one serving. A cheeseburger contains an average of 257 more calories than it did 20 years ago. It would take one hour and 30 minutes of lifting weights to burn those extra calories.<sup>41</sup>

Making the right food choices can be difficult in these surroundings. Unhealthy foods are cheaper and more convenient and come in bigger serving sizes, while healthy foods can be more expensive, often require some preparation and are not always readily available.

STANDARD SERVING SIZES OF MEALS AND BEVERAGES TODAY RANGE FROM A **THIRD LARGER TO TWICE AS LARGE AS** THEY WERE 20 YEARS AGO.

EXHIBIT 8

### Portion Sizes: 1982 and 2002

1982	2002	1982	2002
			
<b>140 calories</b> 3-inch diameter	<b>350 calories</b> 6-inch diameter	<b>500 calories</b>	<b>850 calories</b>
			
<b>210 calories</b> 2.4 ounces	<b>610 calories</b> 6.9 ounces	<b>333 calories</b>	<b>590 calories</b>
			
<b>500 calories</b> 1 cup spaghetti with sauce and 3 small meatballs	<b>1,025 calories</b> 2 cups spaghetti with sauce and 3 large meatballs	<b>45 calories</b> 8 ounces	<b>350 calories</b> 16 ounces with mocha syrup

Source: National Institutes of Health.



## FACTORS CONTRIBUTING TO OBESITY: LET'S EAT OUT

Over the past several decades, Americans have come to love eating out. One U.S. Department of Agriculture (USDA) food survey found that our share of total calories consumed away from home in the U.S. rose from 18 percent in the late 1970s to 32 percent by the mid-1990s. Similarly, the share of our total food budgets spent on food eaten away from home rose from 34 percent in 1974 to about 50 percent in 2004.

The two largest segments of the away-from-home food market are full-service restaurants and fast-food outlets.<sup>42</sup> Rapid growth in both categories has prompted Americans to take advantage of the affordability and convenience they offer. As one study puts it, Americans are experiencing “unprecedented exposure to energy-dense, heavily advertised, inexpensive and highly accessible foods.”<sup>43</sup>

Dining out affects food consumption. You are more likely to eat high-calorie, energy-dense and nutritionally poor foods at restaurants. Consumption of sodium, sugar, total fat and saturated fat all increase when eating away from home, while intake of fiber, calcium, magnesium and other important nutrients falls.

A recent study found that dinner patrons eat **56 percent more** when served larger portions of high-energy-density foods than when served foods lower in energy density. This research also showed that individuals who are served large portions and intend to compensate by reducing their food consumption at other meals have a difficult time doing so. Consequently, the eating-out trend has contributed to the obesity crisis. Dining out can be directly associated with increased BMI.<sup>44</sup>

## FACTORS CONTRIBUTING TO OBESITY: PHYSICAL INACTIVITY

Physical activity is critical to America's fight against obesity. Coronary heart disease, colon cancer, diabetes, high blood pressure and osteoporosis all are related to sedentary lifestyles.<sup>45</sup>

The formula is simple: to lose weight, your caloric intake must be lower than the number of calories you expend. Physical activity also plays a significant role in disease prevention, but 60 percent of Americans are not sufficiently active to achieve these health benefits.

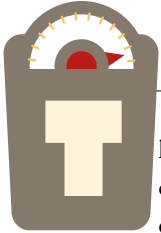
Most children do not meet the recommended level of physical activity — at least 60 minutes of moderate to vigorous physical activity per day. More than half of U.S. adults do not meet the recommendations of at least 150 minutes of moderate activity or 75 minutes of vigorous activity every week, and more than a quarter of adult Americans do no leisure-time physical activity at all. Texas was among the 10 states with the highest rates of physical inactivity in 2007 through 2009, with an estimated 28 percent of its adults sedentary.<sup>46</sup>

Many factors have contributed to the rise in physical inactivity. Better transportation and urbanization have decreased the time people must spend walking and biking. Longer commutes and work hours have cut into exercise time. Some neighborhoods lack parks and sidewalks or are unsafe, further limiting opportunities for exercise.

Television, telephones, computers and other electronic gadgets compete for free time available for physical activity, especially among children. On average, eight- to 18-year-olds spend about seven-and-a-half hours per day watching TV or movies, using a computer or cell phone or playing video games. In Texas, more than 36 percent of high school students (grades 9-12) watched television for three or more hours per day on school days, according to a 2009 Youth Risk Behavior Surveillance survey.<sup>47</sup>

Exercise takes time, and today's society offers many competing pressures on individual free time. But time carved out for physical activity is repaid with better health, less disease and longer life.

# THE COST OF OBESITY



The obesity epidemic accounts for a growing share of the nation's health expenditures. U.S. health care costs due to obesity were estimated at **\$74.2 billion** in 1998, or **5.3 percent** of all medical spending nationwide. By 2006, these costs accounted for **9.1 percent** of annual health costs, or **\$147 billion (in 2008 dollars)**.<sup>48</sup>

A study by Emory University's Kenneth Thorpe found that per capita health expenditures for the nation's obese population rose by 63 percent from 1987 to 2001, compared to just 37 percent for the normal-weight population.<sup>49</sup> Another study by Duke University economist Eric

A. Finkelstein found that average health care spending for obese individuals was 41.5 percent higher than for normal-weight persons in 2006.<sup>50</sup>

## Employer Costs

The U.S. Centers for Medicare and Medicaid Services estimated Texas' total health-related expenditures at \$103.6 billion in 2004.<sup>51</sup> Assuming these expenditures increased at the U.S. average growth rate, Texas spending reached \$130.5 billion in 2008. The Comptroller estimates that adult private employment-sponsored insurance expenditures in Texas com-

prised nearly 23 percent of this amount, or \$29.6 billion.

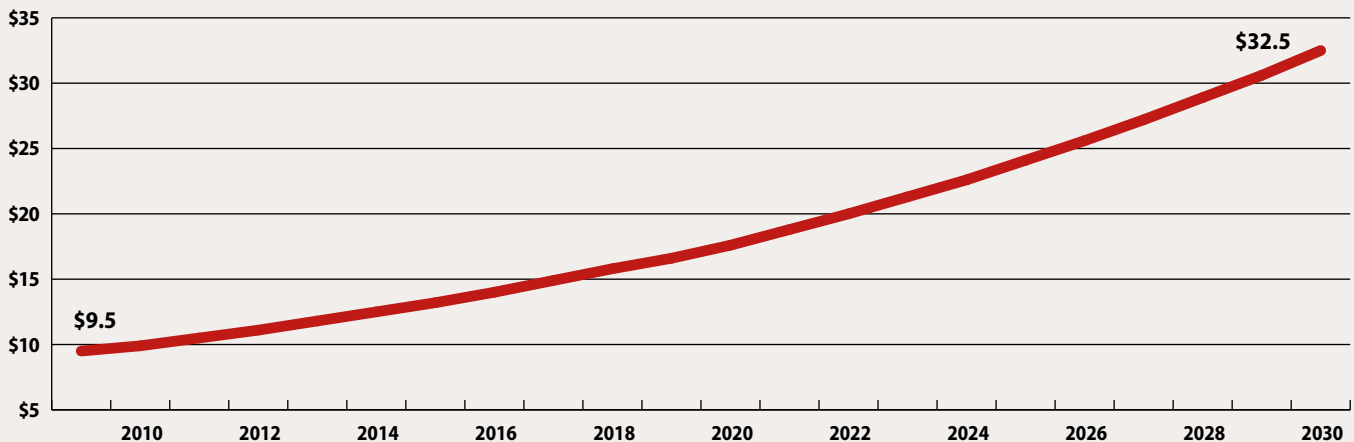
Obesity costs imposed on Texas businesses have risen since first estimated in the Comptroller's 2007 report, *Counting Costs and Calories*. That report estimated obesity-attributable insurance costs at \$1.4 billion in 2005 and projected costs of \$2.1 billion in 2009. New Comptroller estimates show **direct insurance costs to be \$4.0 billion in 2009**.<sup>52</sup>

This rise stems from new data on private insurance costs attributable to obesity. Based on Finkelstein's most recent study, the share of these costs due to obesity rose

*(text continued on page 19)*

EXHIBIT 9

### Total Projected Obesity Costs to Texas Businesses, 2009-2030 (in billions)



Source: Texas Comptroller of Public Accounts.

## OBESITY LINKED TO CHRONIC DISEASES

Obesity is linked to many chronic conditions such as cardiovascular disease, diabetes, asthma, arthritis and certain cancers. Sixty percent of the nation's obese population reported one or more of these conditions in 2006, compared to 33 percent of normal-weight adults.<sup>53</sup>

### Diabetes

Type 2 diabetes is the chronic disease most commonly associated with obesity. Studies indicate that 27 percent of all cases of type 2 diabetes can be attributed to a weight gain of 11 or more pounds after the age of 18.

In 2003, about 2 percent of normal-weight U.S. men and women had type 2 diabetes. By contrast, nearly 5 percent of overweight men and 10 percent of obese men had the disease, as did 7 percent of both overweight and obese women (**Exhibit 10**).

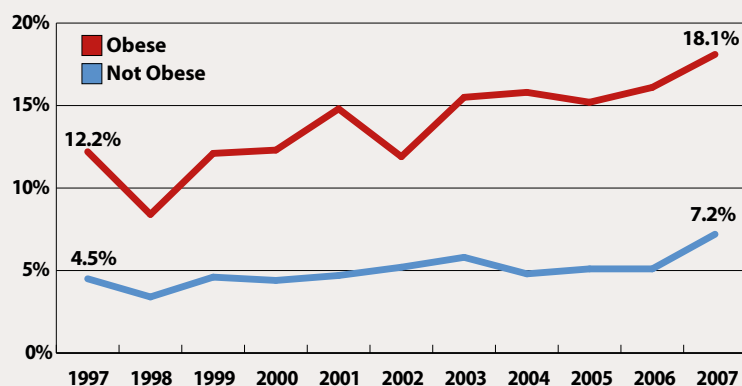
### Cardiovascular Disease

Obesity is a major risk factor for cardiovascular disease (CVD). According to the American Heart Association, more than one in every three American adults has one or more types of CVD. High blood pressure is the most common CVD (74.5 million Americans), but a significant number of adults also suffer from coronary heart disease (17.6 million), heart failure (5.8 million) and stroke (6.4 million).

OBESITY IS LINKED TO MANY **CHRONIC CONDITIONS** SUCH AS CARDIOVASCULAR DISEASE, DIABETES, ASTHMA, ARTHRITIS AND CERTAIN CANCERS

EXHIBIT 10

### Texas Diabetes Prevalence by Weight Status, 1997-2007



Note: Includes Type 1 and Type 2 diabetes.  
Source: Texas Department of State Health Services.

The excess fat associated with obesity, particularly around the waist, raises cholesterol and triglyceride levels, lowers desirable high-density lipoprotein (HDL) cholesterol and raises blood pressure. The American Heart Association estimates the total direct and indirect costs of CVD in the U.S. at \$503.2 billion in 2010.<sup>54</sup>

### Cancer

In the past decade, many scientists have accepted a link between obesity and some types of cancer, including cancers of the colon, breast, kidney, esophagus, gallbladder, pancreas and the ovaries and the endometrial lining of the uterus.

A 2003 study by researchers at the National Cancer Institute and the American Cancer Society attempted to rank the states by incidence of cancers associated with excess weight and found that Texas was in the top 10 for prostate cancer and colon cancer in men and in the top 10 for colon cancer for both genders, and in the top half for kidney cancer, postmenopausal breast cancer and endometrial cancer in women.<sup>55</sup>

The Milken Institute estimated Texas' annual treatment costs for cancer at nearly \$3.4 billion in 2003.<sup>56</sup>

## CANCER PREVENTION AND RESEARCH INSTITUTE OF TEXAS

The Cancer Prevention and Research Institute of Texas (CPRIT), established by a 2007 state constitutional amendment with bond funding of \$3 billion over ten years, provides research funding for cancer prevention and treatment. Among CPRIT's prevention objectives are cancer risks related to obesity.

According to the American Cancer Society, about 570,000 Americans die of cancer each year, and a third of these deaths are linked to poor diet, physical inactivity and excessive weight. Through an August 2010 Request for Information, CPRIT sought data regarding obesity research, policy and prevention programs in Texas, and is currently evaluating these reports to

determine what role it can play in addressing the state's obesity epidemic.

For more information on CPRIT, visit <http://www.cprit.state.tx.us>.

ABOUT 570,000 AMERICANS **DIE OF**  
**CANCER** EACH YEAR, AND A THIRD OF THESE  
DEATHS ARE LINKED TO POOR DIET, PHYSICAL  
INACTIVITY AND EXCESSIVE WEIGHT

from 4.7 percent in 1998 to 12.9 percent in 2006.<sup>57</sup>

This leap greatly increases the Comptroller's estimate of what obesity costs Texas businesses. Our 2007 report, *Counting Costs and Calories*, estimated these costs at \$3.3 billion in 2005. By applying the 12.9 percent cost share cited above, the Comptroller now estimates total costs to business at **\$9.5 billion in 2009**.

If obesity rates and the Texas work force continue to increase as expected, these direct costs could reach nearly **\$32.5 billion in 2030 (Exhibit 9)**.

The total estimate includes cost burdens beyond just direct health care costs.

### ABSENTEEISM

Nationwide absenteeism costs due to obesity have been estimated at \$4.3 billion annually (in 2004 dollars). The costs are more than three times higher for women than for men, at \$3.2 billion versus \$1.1 billion.<sup>58</sup>

One 2005 study estimated that productivity losses due to absenteeism represent 30 percent of all direct health costs.<sup>59</sup> Applying this distribution to the \$4.0 billion in Texas direct insurance costs yields an impact of **\$1.6 billion in absenteeism costs**.

### "PRESENTEEISM"

"Presenteeism" describes the lost productivity of employees who are at work but not fully engaged due to health issues or other distractions. The cost of presenteeism is not as tangible as absenteeism, but

multiple studies show its adverse effects on work productivity are even greater.<sup>60</sup>

One study estimated 2003 national costs due to absenteeism and reduced productivity at \$42.3 billion, or \$1,627 per obese worker. About two-thirds of the costs (\$28.7 billion) were associated with reduced productivity at work, with the remainder representing absenteeism.<sup>61</sup>

By applying this distribution to our estimate of \$1.6 billion in absenteeism costs, we estimate that obesity-related presenteeism cost Texas businesses **\$3.5 billion in 2009**.

EXHIBIT 11

#### Texas Business Costs Attributable to Obesity, 2009

Areas of Costs	Estimated Costs	Percent
Healthcare	\$4,022,324,929	42.5%
Absenteeism	1,643,955,363	17.4
Presenteeism	3,469,229,333	36.7
Disability	321,813,719	3.4
<b>Total Costs</b>	<b>\$9,457,323,345</b>	<b>100.0%</b>

Source: Texas Comptroller of Public Accounts.

## SAN ANTONIANS TEAM UP TO SLIM DOWN

**A** 2009 survey by the U.S. Centers for Disease Control and Prevention indicated that 65.8 percent of the San Antonio area's adults are overweight or obese. Their rates of diabetes and end-stage kidney disease — two common consequences of long-term obesity — are about twice the national average.

San Antonio's civic leaders and medical community are looking for the best ways to change this deeply ingrained "culture of obesity" — to get city residents to eat better and exercise more, improving their quality of life and lowering health-related costs.

The heart of this effort is the San Antonio Metropolitan Health District's obesity initiative, created in early 2010 through a federal stimulus grant, which has assembled a wide-ranging coalition of government agencies, school districts, colleges and universities and private businesses. While the initiative is just

getting under way, and there is not yet any hard data on results, the coalition will:

- work with national and local restaurant chains and restaurant associations to include healthy options;
- create public school salad bars and make more fresh fruits and vegetables available;
- assist in the establishment of farmers' markets;
- outfit public libraries with fitness assessment stations and outdoor exercise equipment; and
- work to ensure that new and improved roads are pedestrian- and bicycle-friendly.

For more information on San Antonio's obesity initiative, visit the San Antonio Metropolitan Health District at <http://www.sanantonio.gov/health/HENewsObesityGrant.html>.

## FIT FOR THE TASK: OBESITY AND PHYSICALLY DEMANDING WORK

**T**he obesity epidemic is likely to have a particularly harsh impact on Texas companies hiring for physically challenging jobs — those in construction, homebuilding, oil exploration and the manufacture of oil and gas machinery, among other fields.

Such jobs require functional strength, balance and stamina, and the demand for candidates to fill them is increasing. In 2010, for example, Texas' mining and logging sector — primarily oil and gas companies — led the state in job growth, adding more than 23,000 jobs.

Texas manufacturers saw expanded hiring in 2010 as well, much of it driven by increased demand for oil and natural gas drilling rigs. Rig construction accounted for the largest share of manufacturing job growth, with an increase of 13,400 jobs.

The effect of the obesity epidemic on the number of workers available for physically demanding jobs is difficult to gauge, but the link between obesity and work disability in general is well documented. A 2009 study by the German Cancer Research Center in Heidelberg, for instance, showed that "obesity increases the risk of work disability due to osteoarthritis and cardiovascular disease."<sup>62</sup>

**A 2009 STUDY SHOWED THAT**  
**"OBESITY INCREASES THE RISK OF WORK**  
**DISABILITY DUE TO OSTEOARTHRITIS**  
**AND CARDIOVASCULAR DISEASE"**

## DISABILITY

To determine the impact of obesity on disability costs, the Comptroller's review team relied on a 2003 study of six large U.S. employers that estimated short-term disability costs caused by conditions commonly associated with obesity. The study attributed 7.7 percent of these costs to obesity.<sup>63</sup>

The review team applied this distribution to \$4.0 billion in direct insurance costs, yielding estimated obesity-attributable disability costs of **\$321.8 million in 2009**.

In all, then, the Comptroller estimates that indirect costs associated with obesity account for 57.5 percent of total obesity-related business health care costs, or \$5.4 billion in 2009. Combined with direct health costs, total business costs were **\$9.5 billion in 2009 (Exhibit 11)**. The indirect costs used in the calculation make up a smaller portion of overall costs than in the studies cited above, so the Comptroller's estimate should be considered conservative.

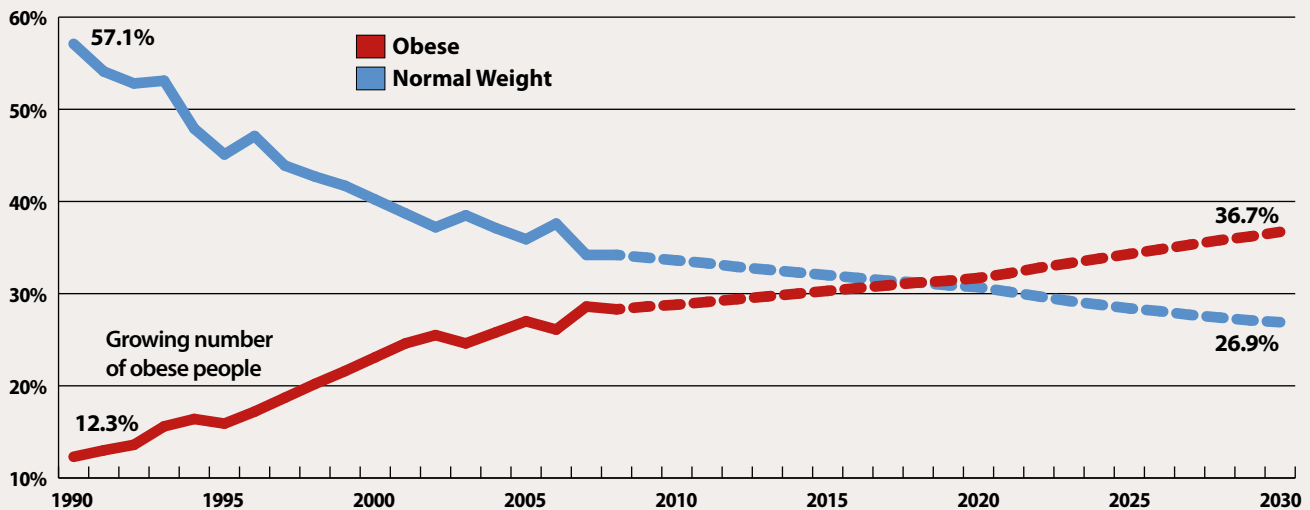
## What Lies Ahead?

The Office of the State Demographer projects that the Texas adult obesity rate will reach nearly 37 percent in 2030 (**Exhibit 12**).

Given this obesity rate and expected increases in employment, obesity costs to Texas businesses could reach nearly **\$32.5 billion in 2030**.

EXHIBIT 12

### Projected Adult Obesity in Texas, 1990-2030



Sources: Texas Comptroller of Public Accounts; and U.S. Centers for Disease Control and Prevention (1990-2007); and Texas Office of the State Demographer (2008-2030).





# WORKSITE WELLNESS PROGRAMS



ising insurance costs are motivating many employers to invest in worksite health

initiatives. These “wellness” and health promotion programs aim to improve employees’ overall health by discouraging unhealthy behaviors and promoting healthier lifestyles. Studies place the potential savings from such programs at hundreds of dollars per employee annually, from lower health insurance premiums, reduced worker compensation claims, reduced employee absenteeism and increased productivity.<sup>64</sup>

Companies use a variety of methods to encourage employees to become healthier, including health risk appraisals (HRAs), counseling, educational materials and disease management and weight-loss programs. Some even provide financial incentives for participation.<sup>65</sup> Many firms also create worksite environments that promote healthy behavior, with on-site fitness facilities or subsidized gym memberships, healthy food in common areas and fitness breaks during the day.<sup>66</sup>

## Return on Investment

Worksite wellness programs cost money even without major building improvements or financial incentives. The business case for these initiatives requires that reductions in insurance and absen-

teeism costs outweigh program costs, providing a positive return on investment (ROI).

Multiple studies of wellness programs have concluded that these programs produce positive ROIs. One review of 42 different studies found that wellness programs can reduce health care expenditures and absenteeism costs by 25 to 30 percent within an average of 3.6 years.

Generally, the ROI for spending on worker health promotion is believed to be about three to one, without considering

factors such as improved employee morale and retention.<sup>67</sup>

## Program Design and Development

The creation of a wellness program generally begins with basic planning to formulate objectives and gauge and build support among leadership and employees. Almost every program involves needs assessments, which in addition to HRAs can include employee input gathered



through committee meetings and surveys, as well as calculations of organizational costs due to poor employee health.

Wellness initiatives can vary widely, depending on the characteristics of the company itself as well as the results of its needs assessment. Common elements include education or health counseling; workplace changes, such as ensuring that vending machines offer healthy snacks; subsidized or free weight-loss and smoking cessation programs; and fitness activities and facilities or rebates on gym memberships. Often, such programs offer incentives to participants — anything from T-shirts and cookbooks to reduced insurance premiums and gift cards.<sup>68</sup>

## Successful Wellness Programs

Presented here are profiles of 12 different workplace wellness programs implemented in businesses and public or semi-public organizations.

These employers range in size from a few hundred workers in one city to hundreds of thousands of employees worldwide. Some are Texas firms and most employ Texas workers. The first four profiles examine programs initially described in the 2007 Comptroller report *Counting Costs and Calories*. These company programs have been revisited to highlight the lessons they offer, the most obvious being

that the companies continue to see value in their investment in wellness programs.

Generally, successful worksite wellness programs incorporate most or all of the following elements:

- comprehensive program design and a continuing commitment;
- assessments of employee health status to identify risks;
- individual counseling about assessment results, especially for high-risk employees;
- risk-reduction strategies; and
- marketing, incentives and changes to the work environment to encourage strong participation.<sup>69</sup>

Company/Agency	Wellness Program Description	Results/ROI
<b>USAA</b> San Antonio, Texas 22,000 U.S. employees, 14,000 in Texas	USAA has learned some lessons since creating its award-winning wellness program, "Take Care of Your Health," in 2002. <ul style="list-style-type: none"> <li>• Even with 85 percent worker participation in 2009, USAA found that obesity is a particularly tough challenge.</li> <li>• Highlights: program integration with company benefit plans; collection of data on the health of employees and their families, allowing USAA to track progress and savings and identify problem areas.</li> <li>• Analysis of company health care spending suggests that obesity is a root cause of most expenditures.</li> <li>• Despite program's successes, USAA workers were still gaining weight, so the company added two programs with financial incentives in 2008.</li> <li>• "Healthy Points" awards points for wellness activities. Workers earning 500 points in a year receive \$300 premium reduction.</li> <li>• "BMI Reduction" is a weight-loss program for those with BMI above 26; workers get \$250 cash bonus for 10 percent loss in a year.</li> </ul>	<ul style="list-style-type: none"> <li>• Workers' medical and disability cost increases have been held to just 3 percent, compared to 9 percent for adult dependents.</li> <li>• Early results indicate that those completing Healthy Points generally lower BMI as well as health care costs.</li> <li>• Participants in BMI Reduction lost a net 6,054 pounds in the first year. The three BMI risk groups all saw downward shifts; many participants dropped to next lower risk level.</li> <li>• Average BMI among USAA workers fell in 2009, for the first time in five years.</li> </ul>
<b>H-E-B Grocery</b> San Antonio, Texas 70,000 in Texas	"Healthy at H-E-B" offers employees a number of wellness initiatives. <ul style="list-style-type: none"> <li>• These include company-wide health challenges; weight and care management programs; fully covered preventive health screenings.</li> <li>• Financial incentives encourage employee participation; 75 percent of employees participated in 2009.</li> <li>• Company made a concerted effort to connect with employees in 2010, a designated "Year of Health and Wellness."</li> <li>• More than 600 employees serve as wellness champions, sharing information with colleagues and generating interest in wellness activities.</li> </ul>	<ul style="list-style-type: none"> <li>• Healthy at H-E-B continues to provide positive returns after more than five years of operation.</li> <li>• H-E-B consistently outperforms other comparable employers in health spending, with costs increasing at a significantly slower pace.</li> <li>• From 2003 to 2010, health costs for large employers rose by a national average of 9.3 percent; H-E-B costs rose by just 3.7 percent.</li> <li>• Employees in the wellness program have reported improved health biometrics.</li> </ul>
<b>General Motors</b> Detroit, Michigan 79,000 U.S. employees, 2,800 in Texas	General Motors has had a workplace wellness program in place for more than 15 years. <ul style="list-style-type: none"> <li>• Even after huge financial difficulties culminating in the 2009 bankruptcy, the <i>LifeSteps</i> program is still part of GM's business structure.</li> <li>• <i>LifeSteps</i> is ongoing but scaled down. No enhancements in the last two to three years, although new initiatives are being considered for 2011.</li> <li>• Program saw significant cutbacks in resources needed to track progress and outcomes in employee participation and health status.</li> </ul>	<ul style="list-style-type: none"> <li>• With established track record of savings from <i>LifeSteps</i>, the business case for continued investment in worker wellness remains unchanged.</li> </ul>

Company/Agency	Wellness Program Description	Results/ROI
<b>Dell, Inc.</b> Round Rock, Texas 94,000 employees worldwide, 25,000 in U.S.	<p>Launched in 2004, Dell's "Well at Dell" comprehensive wellness program gives employees access to a range of resources, including:</p> <ul style="list-style-type: none"> <li>• on-site physician;</li> <li>• 24-hour nurse hotline;</li> <li>• individual health coaching;</li> <li>• online health management programs;</li> <li>• worksite fitness centers;</li> <li>• cafeterias offering healthy food options.</li> </ul> <p>In 2009, about 10,000 of 25,000 employees participated in Well at Dell.</p> <ul style="list-style-type: none"> <li>• Program uses health risk assessments, medical insurance claims to gauge employees' health risks.</li> <li>• To combat obesity, Dell employs innovative pricing strategy promoting healthy cafeteria choices: <ul style="list-style-type: none"> <li>- healthy foods usually less expensive than unhealthy options;</li> <li>- baked goods less expensive than fried foods;</li> <li>- bottled water less expensive than soft drinks.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• As of mid-2009, 83 percent of employees receiving health coaching had reduced or eliminated at least one health risk.</li> <li>• Of participants, 71 percent eliminated or mitigated hypertension risks; 56 percent met recommended goals for physical activity.</li> <li>• Of workers in Cardiac Management Program: <ul style="list-style-type: none"> <li>- 86 percent improved total cholesterol levels;</li> <li>- 88 percent improved LDL cholesterol levels;</li> <li>- 72 percent increased exercise;</li> <li>- 64 percent either met their BMI goals or made improvements in their BMI.</li> </ul> </li> </ul>
<b>Johnson &amp; Johnson</b> Brunswick, New Jersey 117,000 employees worldwide	<p>Johnson &amp; Johnson (J&amp;J), created its first wellness program in 1979 to help its employees become "the healthiest in the world."</p> <ul style="list-style-type: none"> <li>• Company devoted substantial amounts of money to program, including careful evaluations of results.</li> <li>• In 1995, began Health and Wellness Program (HWP), including: <ul style="list-style-type: none"> <li>- health risk assessments;</li> <li>- referral to intervention programs for high-risk conditions or behaviors;</li> <li>- health education;</li> <li>- benefit coverage for screenings and preventive services;</li> <li>- financial incentives;</li> <li>- strong corporate messages to encourage participation.</li> </ul> </li> <li>• About 90 percent employee participation in HWP by U.S. workers in 1995-1999.</li> <li>• Analyzed medical claims of 18,000+ employees made from 1990 to 1999 to track effects of program in detail.</li> <li>• J&amp;J's program continues evolving. New prevention program, Healthy People, includes: <ul style="list-style-type: none"> <li>- fitness campaign;</li> <li>- healthy food at J&amp;J cafeterias, vending machines and events;</li> <li>- "Worldwide Tobacco-Free Workplace" with various smoking cessation programs offered (free in U.S.) to employees and dependents.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Analysis of outcomes (1990-1999) found that some categories of health care usage, including doctor visits, actually increased in first year or two.</li> <li>• Costs for hospital stays, however, fell dramatically.</li> <li>• Over time, J&amp;J realized savings in all categories except emergency room visits. Savings after four years of HWP totaled \$224.66 annually per employee.</li> <li>• From 2006 through 2008, number of U.S. employees in high and medium health risk categories fell from 1.4 percent and 20.5 percent to 1.1 percent and 13.9 percent, respectively.</li> </ul>
<b>Texas Instruments</b> Dallas, Texas 26,700 employees worldwide, 9,000 in Texas	<p>Texas Instruments' Live Healthy Program targets unhealthy eating habits and inactivity through programs that engage the entire family.</p> <ul style="list-style-type: none"> <li>• Employees and family members can log on to an online health portal that includes resources such as: <ul style="list-style-type: none"> <li>- healthy recipes;</li> <li>- a food log;</li> <li>- nutrition games.</li> </ul> </li> <li>• Company also sends quarterly mailings to employees' homes featuring "Live Healthy" section, other wellness info.</li> <li>• Provides childcare at worksite fitness centers.</li> <li>• Activities specifically for dependents, such as week-long summer camps, to encourage healthy lifestyles from an early age.</li> </ul>	<ul style="list-style-type: none"> <li>• Health risk assessments in 2007 indicated that there were fewer employees considered "high risk" than in 2006. The share of employees at high risk fell from 40 to 35 percent. Forty-six percent of the employees were considered medium risk and 18 percent were low risk.</li> </ul>
<b>Dallas/Fort Worth International Airport</b> 1,700 employees	<p>Dallas/Fort Worth Airport (D/FW) wellness initiative, LiveWell, launched in 2007. Program incorporates:</p> <ul style="list-style-type: none"> <li>- worksite fitness facilities;</li> <li>- online education resources;</li> <li>- wellness circulars;</li> <li>- incentive award program.</li> </ul> <p>After health-risk assessments, obesity was found to be biggest threat facing employees.</p> <ul style="list-style-type: none"> <li>• In 2008, more than 75 percent of work force was obese or overweight. Of the most prevalent employee health risks, 53.7 percent related to body weight.</li> <li>• To create supportive work environment, built 14,500 square-foot fitness facility housing: <ul style="list-style-type: none"> <li>- indoor half-basketball court;</li> <li>- two racquetball courts;</li> <li>- three indoor and four outdoor tennis courts;</li> <li>- two volleyball sand courts;</li> <li>- an exercise studio;</li> <li>- three strength/cardio training rooms;</li> <li>- shower facilities.</li> </ul> </li> <li>• At annual health fair, employees can receive free health screenings and interact with service providers, including massage therapists and chiropractors.</li> </ul>	<ul style="list-style-type: none"> <li>• Between 2007 and 2009, the share of employees with high and medium risks fell by 3.1 percent and 1.8 percent, respectively.</li> <li>• Low-risk group expanded by 4.8 percent.</li> </ul>

Company/Agency	Wellness Program Description	Results/ROI
<b>IBM</b> Armonk, New York 399,400 employees worldwide	<p>IBM uses a number of incentives to promote health among employees and their family members.</p> <ul style="list-style-type: none"> <li>• Employees can choose two of five cash incentive health programs, each awarding \$150 annually for participation.</li> <li>• Children's Health Rebate Program targets dependents, as obesity is often a family disease. Program gives parents online tools to help develop action plans, set goals for: <ul style="list-style-type: none"> <li>- physical activity;</li> <li>- Nutrition;</li> <li>- "screen time" (front of TV);</li> <li>- "role modeling" (participation in healthy activities as a family).</li> </ul> </li> <li>• Cash incentive encourages high rates of participation.</li> </ul>	<ul style="list-style-type: none"> <li>• In 2008, company saw improvements across all of focus areas.</li> <li>• Highest gains for increased physical activity.</li> <li>• Employees demonstrate high levels of satisfaction with program, which creates goodwill and contributes to broader strategy of promoting "a culture of health."</li> <li>• Between 2004 and 2007, estimated savings of \$2.42 for every dollar spent on wellness.</li> <li>• Total savings of \$191 million for \$79 million investment.</li> </ul>
<b>City of Hurst</b> Hurst, Texas 400 employees	<p>The city of Hurst, Texas provides its employees and retirees and their family members with a number of wellness programs and activities.</p> <ul style="list-style-type: none"> <li>• Hurst Employee Wellness program established in 2005; city's costs have decreased, employee eating habits, physical activity have improved.</li> <li>• Each year, wellness committee decides program offerings based on worker medical data, health risk assessments.</li> <li>• Program managers also gather employee input using annual survey to gauge interests.</li> <li>• Encourages participation with cash and gift incentives, additional paid leave. Participating employees: <ul style="list-style-type: none"> <li>- can earn up to eight hours of paid vacation;</li> <li>- receive subsidies for gym and Weight Watchers memberships;</li> <li>- receive \$75 that can be used for wellness-related expenses.</li> </ul> </li> <li>• Weight-loss programs popular with employees; Biggest Loser competition (10-week weight management program) particularly successful. <ul style="list-style-type: none"> <li>- In 2009, 35 percent of employees participated, lost a total of 423 pounds.</li> <li>- Between 2007 and 2009, city employees lost 1,267 pounds.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Program counteracted rising health insurance, employee absenteeism costs.</li> <li>• Health insurance premiums remained at 2006 levels in 2007 and 2008, bucking general trend of rising health costs.</li> <li>• Between 2007 and 2009, employee absenteeism fell by 38 percent.</li> </ul>
<b>Capital Metropolitan Transportation Authority</b> Austin, Texas 1,075 employees	<p>The Capital Metropolitan Transportation Authority of Austin launched worksite wellness program in January 2003, contracting with Health and Lifestyles of Austin Corporate Wellness, Inc.</p> <ul style="list-style-type: none"> <li>• Program provides a comprehensive range of tools: <ul style="list-style-type: none"> <li>- access to 24-hour fitness centers;</li> <li>- personal trainers, wellness coaches;</li> <li>- full body assessments;</li> <li>- on-site dietician;</li> <li>- Weight Watchers classes, healthy-eating workshops;</li> <li>- walking club, bike loan program;</li> <li>- cash incentives for losing weight and quitting smoking.</li> </ul> </li> <li>• Also offers weekly discount coupons to be used toward purchasing healthy cafeteria food.</li> <li>• Ensures that at least 60 percent of vending machine offerings are healthy choices.</li> <li>• Offers smoking cessation classes, free flu shots, stress reduction workshops.</li> </ul>	<ul style="list-style-type: none"> <li>• Claims savings of \$2.43 for every dollar spent on the program since 2003.</li> <li>• Health care costs, rising precipitously before 2003, slowed then fell, by 4 percent in both 2007 and 2008 and 5 percent in 2009.</li> <li>• Between 2003 and 2009, authority saw 24 percent net increase in health care costs, compared to projection of 49 percent increase.</li> <li>• Absenteeism, rising prior to 2003, fell in each of past five years.</li> <li>• Absenteeism rates 37 percent lower in 2009 than in 2003.</li> </ul>
<b>Lincoln Industries</b> Lincoln, Nebraska 400 employees	<p>Lincoln Industries, a metals manufacturing company, provides a prominent example of the value and possibilities of employee wellness programs.</p> <ul style="list-style-type: none"> <li>• Program won multiple awards from groups, including: <ul style="list-style-type: none"> <li>- American Heart Association;</li> <li>- U.S. Department of Health and Human Services;</li> <li>- U.S. Centers for Disease Control.</li> </ul> </li> <li>• Healthy lifestyles built into workers' performance objectives for more than 20 years.</li> <li>• Wellness committee formed in 1990; full-time wellness manager hired in 2000.</li> <li>• Facility went tobacco-free in 2002.</li> <li>• Quarterly health checks became mandatory in 2003; monitor risk indicators such as weight, blood pressure, flexibility and tobacco use.</li> <li>• Participation rate for mostly voluntary program greater than 90 percent in 2009.</li> <li>• Go! Platinum program's tools help employees improve their health, move into fitness rankings of bronze, silver, gold and platinum.</li> <li>• Employee health checks accompanied by consultations to review wellness goals.</li> <li>• Health objectives included in company's performance management system.</li> <li>• Tobacco cessation, Weight Watchers at Work programs offered continuously.</li> <li>• Nonsmoking employees receive discounts, partial reimbursements for gym memberships, purchases of exercise equipment.</li> <li>• Stretching sessions required before each shift.</li> <li>• Neuromuscular therapy available on site.</li> </ul>	<ul style="list-style-type: none"> <li>• Good returns on its wellness investment: <ul style="list-style-type: none"> <li>- health care cost savings of more than \$1 million;</li> <li>- tobacco use down from 42 percent in 2004 to 17 percent in 2009;</li> <li>- workers' compensation claims more than \$510,000 in 2003 versus just \$43,000 in 2009;</li> <li>- health care costs per person about half to less than two-thirds of industry average.</li> </ul> </li> </ul>



Company/Agency	Wellness Program Description	Results/ROI
<b>City of Houston</b> Houston, Texas 23,000 employees	City developed "Wellness Connection" program for its workers in 2007. <ul style="list-style-type: none"> <li>• Built around known best practices, including strong leadership commitment, integrated incentives supportive organizational culture and data management and evaluation.</li> <li>• Focuses on healthy eating, active living, stress management and tobacco cessation.</li> <li>• Sections include wellness programs (30 – 60 minute activities at city departments), coaching round-tables (wellness educator helping 10 or more workers at a time with behavioral changes) and Know Your Numbers (ongoing screenings to track biometrics).</li> <li>• Yearlong calendar of activities and events posted on Wellness Connection website, along with a feedback survey.</li> <li>• Education and communication consistent and pervasive, such as e-Motivation email messages and 250 Wellness Ambassador employees.</li> <li>• Some events, activities open to the community.</li> </ul>	<ul style="list-style-type: none"> <li>• From July 2007 through December 2008 had 10,732 participants; from January through May 2009 9,543 employees involved.</li> <li>• Pilot Active Living program with 42 workers completed eight-week class, lost a total of 190 pounds.</li> <li>• In 2010 Great American Smoke Out, 3,500 city employees participated.</li> <li>• Participants in 2009 and 2010 joint city/ Blue Cross Blue Shield Metabolic Syndrome (MetS) programs saw results: <ul style="list-style-type: none"> <li>- majority reversed their syndrome (66 percent and 57 percent in 2009 and 2010, respectively);</li> <li>- average weight loss of more than 13 pounds (90 percent and 94 percent); and</li> <li>- total weight loss of 661 and 447 pounds.</li> </ul> </li> </ul>

**USAA:** Peter Wald, vice president and enterprise medical director, USAA; Texas Comptroller of Public Accounts, *Counting Costs and Calories: Measuring the Cost of Obesity to Texas Employers*, p. 22; and The Health Project, C. Everett Koop National Health Awards, "USAA – Take Care of Your Health," [http://thehealthproject.com/past\\_winners/year/2006/usaa/description.html](http://thehealthproject.com/past_winners/year/2006/usaa/description.html).

**H-E-B:** Brooke Brownlow, vice president of Human Resources, H-E-B; and Erica Bartram, Benefits Strategy and Design, H-E-B.

**General Motors:** Alan Adler, media relations, General Motors; and Shelly Hoffman, director, Employee Benefits, Public Policy, Compliance and Communications, General Motors.

**Dell Inc.:** Tre McCalister, global benefits manager, Dell Inc.; and National Business Group on Health, "Well at Dell: Creating a Campus Culture of Employee Health," *Platinum Awards: Best Employers for Healthy Lifestyles 2009* (2009), pp. 1-4.

**Johnson & Johnson:** Johnson & Johnson, "Our Company," <http://www.jnj.com/connect/about-jnj/>; Ronald J. Ozminkowski, Davina Ling, Ron Z. Goetzel, Jennifer A. Bruno, Kathleen R. Rutter, Fikry Isaac and Sara Wang, "Long-Term Impact of Johnson & Johnson's Health & Wellness Program on Health Care Utilization and Expenditures," *Journal of Occupational and Environmental Medicine* (January 2002), pp. 21-28; and Ron Z. Goetzel, Ronald J. Ozminkowski, Jennifer A. Bruno, Kathleen R. Rutter, Fikry Issac and Shaohung Wang, "The Long-Term Impact of Johnson & Johnson's Health & Wellness Program on Employee Health Risks," *Journal of Occupational and Environmental Medicine* (May 2002), pp. 417-419.

**Texas Instruments:** Texas Instruments, "TI Fact Sheet," <http://www.ti.com/corp/docs/company/factsheet.shtml>; LuAnn Heinen and Helen Darling, "Addressing Obesity in the Workplace: The Role of Employers," *Milbank Quarterly* (No. 1, 2009), pp. 112-113.

**Dallas/Fort Worth International Airport:** Amanda-Rae Garcia, wellness manager, Dallas/Fort Worth International Airport; Health Management Research Center, DFW Airport: 2007, 2008 and 2009 3-Time Repeated Health Risk Appraisal Summary Report (Ann Arbor, Michigan; University of Michigan, June 22, 2009), p. 1; Texas Chapter of the Public Risk Management Association, "Congratulations to This Year's Risk Manager of the Year!" *Texas Prima Press* (April 2010), p. 4, [http://www.texasprima.org/DOWNLOADS/newsletters/2010\\_04-April.pdf](http://www.texasprima.org/DOWNLOADS/newsletters/2010_04-April.pdf) (last visited January 11, 2011); and Dallas/Fort Worth International Airport Board, *2008 Champions in Health Award Application: Non-Profit, Government/Education, Small Company*, (DFW Airport, Texas, 2008), pp. 3, 6-8 and 21.

**IBM:** "About IBM," <http://www.ibm.com/ibm/us/en/>; "Medical Highlights," <http://www-01.ibm.com/employment/us/benefits/s07a.shtml>; "IBM's Global Wellness Initiatives," [http://www.ibm.com/ibm/responsibility/employees\\_global\\_wellness.shtml](http://www.ibm.com/ibm/responsibility/employees_global_wellness.shtml); "IBM to Provide Employees with 100% Primary Health Care Coverage, New Wellness Rebate," <http://www-03.ibm.com/press/us/en/pressrelease/28728.wss>; *Childhood Obesity: The Way Forward*, Susan Dentzer, ed., slides 37-41, available in PowerPoint format at [http://www.healthaffairs.org/issue\\_briefings/2010\\_03\\_02\\_childhood\\_obesity/media/slides.ppt](http://www.healthaffairs.org/issue_briefings/2010_03_02_childhood_obesity/media/slides.ppt); and Martin-J Sepulveda, Fan Tait, Edward Zimmerman and Dee Edington, "Impact of Childhood Obesity on Employers," *Health Affairs* (March 2010), pp. 516-518.

**City of Hurst:** Esther White, wellness coordinator, City of Hurst, Texas; and "City of Hurst, Texas, Wellness Program."

**Capital Metropolitan Transportation Authority:** Kim Peterson, employee relations manager, and Michael Nyren, risk manager, Capital Metropolitan Transportation Authority; Capital Metropolitan Transportation Authority, "Capital Metro Wellness Program Recognized for Improving Employee Health and Reducing Costs," Austin, Texas, June 4, 2009, [http://www.capmetro.org/news/news\\_detail.asp?id=6954](http://www.capmetro.org/news/news_detail.asp?id=6954); and U.S. Centers for Disease Control and Prevention, "A Comprehensive Worksite Wellness Program in Austin, Texas: Partnership Between Steps to a Healthier Austin and Capital Metropolitan Transportation Authority," by Lynn Davis, Karina Loyo, Aerie Glowka, Rick Schwertfeger, Lisa Danielson, Cecily Brea, Alyssa Easton, and Shannon Griffin-Blake, *Preventing Chronic Disease: Public Health Research, Practice, and Policy* (April 2009), pp. 1-5, [http://www.cdc.gov/pcd/issues/2009/Apr/pdf/08\\_0206.pdf](http://www.cdc.gov/pcd/issues/2009/Apr/pdf/08_0206.pdf).

**Lincoln Industries:** Lincoln Industries, "Wellness," <http://www.lincolindustries.com/wellness>; Marc LeBaron, "Corporate Culture," *Inside Supply Management* (September 2009), p. 10, [http://www.lincolindustries.com/who\\_we\\_are/news\\_view?article\\_id=22480](http://www.lincolindustries.com/who_we_are/news_view?article_id=22480); and Institute of Management and Administration, "How Lincoln Industries Hardwired Wellness Into Its Culture," *Builder Jobs* (May 13, 2010), <http://www.builderjobs.com/article.hwx/Q/articleId.1272644>.

**City of Houston:** Nicole Hare-Everline, wellness director, City of Houston.



## FIT ENOUGH TO FIGHT? OBESITY AND THE MILITARY

**T**he U.S. military has not escaped the impact of the obesity crisis. Between 1995 and 2008, at least 140,000 recruits arriving at Military Entrance Processing Centers weighed too much to pass their entrance physicals — and this does not include obviously overweight candidates turned away by recruiters. The Army estimates that **27 percent** of the nation's young adults (17 to 24 years old) are too fat to qualify for military service. Military leaders see these numbers as a threat to the armed services' future strength and even the nation's security.<sup>70</sup>

Obesity causes problems beyond recruiting. After boot camp, the weight challenges can continue; hundreds of enlistees are involuntarily discharged from duty because they cannot

stay within weight limits. About 1,200 enlistees are discharged in this way each year. Each represents about \$50,000 in recruitment and training costs, implying an annual cost of \$60 million. Obesity-related health care for those remaining in the military adds an additional cost.

Mission: Readiness, an organization of retired generals and admirals, advocates for national standards for school meals and nutrition education for students, parents and teachers to alleviate the problem of overweight recruits. It also supports increased funding for school food services to help them avoid using cheap, calorie-dense but low-nutrition foods to stretch meals.<sup>71</sup>

## TEXAS FITNESS NOW

**T**he Texas Fitness Now grant program, developed in 2007 by Comptroller Susan Combs, awards middle schools \$10 million annually for physical education and fitness programs. Targeting schools with student populations that are at least 60 percent economically disadvantaged, Texas Fitness Now helps combat the unhealthy, sedentary lifestyles of children who may have few recreational resources outside of school.

Texas Fitness Now grants, which are administered by the Texas Education Agency, are intended to ensure that children participate in at least 30 minutes of physical activity each day, and learn nutritional information and strategies for keeping fit. The program helps them develop lifelong healthy habits that can prevent debilitating chronic disease and improve academic achievement.

To be eligible for the grants, schools must agree to conduct a "before-and-after" physical fitness test called Fitnessgram® on all program participants. Fitnessgram®, developed by the Cooper Institute in Dallas, tests children in six ways to measure body strength, aerobic capacity, cardiovascular fitness and flexibility. The institute compares test results against a scientifically based,

age-appropriate standard. Students meeting institute standards are deemed to be in the "Healthy Fitness Zone."

Several teachers using Texas Fitness Now grants report that they and their students are enjoying the program. In 2010, one teacher wrote, "I have enjoyed learning about the program as well as reigniting my love for seeing my students excited about becoming physically fit!" Said another, "My Physical Education classes and students have benefited from the Texas Fitness Now grant.... I am able to show students sports, activities and games they would have never been able to play because of this grant."

Still another said, "Overall we believe our campuses' participation in the Texas Fitness Now program was a very positive experience. We were able to see improvement on student achievement levels and also student morale seemed to stay positive during the fitness requirements. Students are absolutely more aware of the attributes of eating healthy and maintaining a regular fitness routine."<sup>72</sup>

For more information on Texas Fitness Now, visit [http://www.tea.state.tx.us/Fitness\\_Now.html](http://www.tea.state.tx.us/Fitness_Now.html).

## ACTIVE LIFE

**A**CTIVE Life, an Austin-based healthy living organization, believes the national obesity epidemic is just one aspect of an epidemic of unhealthy living. Active Life's mission is to "make healthy the norm" by changing a culture and society that too often fosters unhealthy choices in our schools, communities and workplaces.

ACTIVE Life has partnered with several corporate and nonprofit organizations to expand its mission of fostering a more active American culture. In May 2010, ACTIVE Life teamed up with Austin Independent School District, H-E-B and Blue Cross Blue Shield for its first annual Make the Movement Day, producing nearly 90,000 "Moments" of healthy activity across the U.S. Team ACTIVE Life, a free Web-based platform for people and places to share and promote healthy habits, has reached

more than 900,000 people in 744 schools, 135 community organizations and 15 child care centers across 44 states.

For more information on ACTIVE life, visit <http://www.activelifemovement.org>.

### **Austin Fit**

*Austin Fit* magazine, a monthly founded in 1997, provides citizens with timely, informative articles on health, fitness and nutrition information, including listings of the latest health and fitness events as well as healthy recipes. In 2004, Lou Earle purchased *Austin Fit* and later launched a second magazine, *Austin Runner*, which merged with *Austin Fit* in 2009.

For more information on *Austin Fit*, visit <http://www.austinfmagazine.com/>.

## TEXAS RESTAURANT ASSOCIATION CHAMPIONS MENU REDO

**T**he Texas Restaurant Association (TRA) is working to bring more nutritional information and healthier options to diners.

National health care legislation will require restaurant chains of 20 locations or more to post calorie counts on all menu items beginning this year. TRA, however, is encouraging establishments that fall outside this mandate to post information about healthy options on their menus.

According to TRA, non-chain restaurants make up 60 percent of the state total and nearly half of its restaurant revenue.

Increased demand for nutritional transparency has prompted TRA to work with FoodCALC, a company that conducts nutritional analysis on restaurant menu items, to develop case studies with Garrido's and Jorge's, both Austin-based Mexican restaurants. Their menu items were analyzed in December 2010 for calories and other nutritional information. Depending on the results, the restaurants may change the recipes to include lower-

calorie ingredients. While there's always going to be queso on the menu, healthier options would be prominently featured with calorie counts to help diners make a more informed choice.

When completed later this year, these case studies will be highlighted in TRA's magazine and website.

For more information, visit TRA at [www.restaurantville.com](http://www.restaurantville.com).

**NATIONAL HEALTH CARE  
LEGISLATION** WILL REQUIRE  
RESTAURANT CHAINS OF 20 LOCATIONS OR MORE  
TO POST CALORIE COUNTS ON ALL  
MENU ITEMS BEGINNING THIS YEAR

## THE (NOT-SO) THIN BLUE LINE: OBESITY CHALLENGES POLICE ACADEMIES

**S**ome Texas law enforcement agencies are finding it increasingly difficult to recruit cadets physically fit enough to become peace officers.

Mike Harper, an associate director for professional education at Dallas' Cooper Institute, teaches classes for law enforcement agencies on how to prepare and physically screen prospective officers. According to Harper, rising obesity rates are affecting the pool of applicants.

"Without a doubt, young men and women who are applying for academies are fatter and heavier than at any time in history," Harper says. "This is a reflection of obesity in the population as a whole."

Each force has its own fitness standards. The Fort Worth Police Department requires applicants to complete a Physical Assessment Test (PAT), an obstacle course combining sprints, barrier and stair climbing, physical restraint tasks, pursuit, victim rescue and trigger-pull assessments. All candidates wear between 14 and 17 pounds of gear and must finish the course in two minutes and 55 seconds or less.

Fort Worth PD Sgt. L.G. Klein has worked at the city's academy for 18 years and agrees with Harper's assessment. She says the gap between fitness requirements and candidates' actual fitness may soon be widened further due to tighter standards.

Klein says that the current Fort Worth test is not difficult, noting a 397-pound candidate — for whom a large enough gun belt could not be found — passed. The department may return to more stringent testing that better reflects the physical requirements of the job when the city's labor agreement with its officers expires in October 2012.

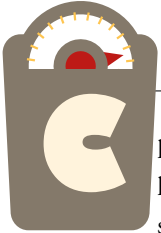
Harper says higher rates of obesity translate into higher dropout rates at police academies.

"A common complaint [from police agencies] is that the people entering the academies today are so unfit and overweight that many drop out or are dismissed," Harper says. "This is a tremendous waste of time, money and resources."

Klein says it costs taxpayers \$200,000 to move a candidate from admission to graduation from the seven-month academy program.

For more information on the Fort Worth Police Department's cadet requirements, visit <http://www.fortworthpd.com/Recruiting/>. For more information on the Cooper Institute's program for training law enforcement candidates, visit <http://www.cooperinstitute.org/personal-training-education/law-fire-military-training/index.cfm>.

# REDUCING CHILDHOOD OBESITY



Children have an especially hard time growing up in a society that seems to equate body image with personal value. And they are often incapable of changing the factors in their environment that contribute to obesity, such as poor food choices by caregivers, heredity, boredom, loneliness, family stress, untreated medical or psychological problems and feelings of shame, guilt and helplessness.

While many employers are trying to control obesity-related health care costs, the future work force — Texas children — is also involved in the battle of the bulge. Businesses may find that even their youngest new employees already suffer from chronic diseases, higher health risks or physical limitations stemming from excess weight and poor nutrition.

Because such a large part of childhood is spent in public school, governments and school districts are becoming increasingly involved with the issue of childhood obesity.

## A National School Nutrition Policy

In 1946, the U.S. Congress enacted the Richard B. Russell National School Lunch Act. Underscoring the urgency of its actions, Congress declared that the act was “a measure of national security, to

safeguard the health and well-being of the Nation’s children.”<sup>73</sup>

The National School Lunch Program later expanded to include the School Breakfast Program, the Special Milk Program and the Schools Commodity Program. These programs provide partial reimbursement to school districts for reduced-price meals and snacks they provide to low-income schoolchildren.

Congress gave the U.S. Department of Agriculture (USDA) administrative jurisdiction over these programs, but allowed state education agencies to run them. The Texas Education Agency (TEA) was Texas’ first program administrator; in 2003, the Texas Department of Agriculture (TDA) assumed this role.

In the 2008-09 school year, Texas children received 525 million reduced-price lunches, almost 247 million breakfasts and 20 million snacks at a total cost of \$1.3 billion in both state and federal funds.<sup>74</sup>

## “Competitive Foods”

Before the 1970s, school campuses rarely offered carbonated beverages, chewing gum or candy through school stores or vending machines. These foods acquired the name “competitive foods” because they are sold in competition with federally subsidized meals.

Since then, however, many school districts have not only allowed these foods to be sold on school grounds, but also entered into profitable — sometimes *highly* profitable — contracts with food and beverage vendors. In 2006, the U.S. Centers for Disease Control and Prevention (CDC) reported that 89 percent of senior high schools had vending machines or a school store selling competitive foods, as did 71 percent of middle schools and nearly 33 percent of elementary schools. The most popular beverages sold were sports drinks, carbonated drinks and fruit drinks with less than 100 percent juice; the most common foods were salty snacks.<sup>75</sup>

In the late 1970s, USDA developed a definition for “foods of minimal nutritional value” (FMNVs). These included many competitive foods as well as fried foods, ice cream, some types of candy and so forth. USDA rules developed at the time did not permit FMNVs in public schools until the last meal period.<sup>76</sup> In 1983, the National Soft Drink Association successfully sued USDA to allow these foods to be made available throughout the school day, but the court also said that FMNVs could not be sold in food-service areas during meal periods.<sup>77</sup>

Congress approved relatively few childhood nutrition initiatives after the FMNV court ruling until 1994, when it

## WHOLE FOODS BRINGS SALAD TO SCHOOL LUNCH MIX

**M**ove over, chicken nuggets.

In 2010, Austin-based Whole Foods Market teamed with author and chef Ann Cooper, “the Renegade Lunch Lady,” to kick off the Great American Salad Bar Project, aimed at putting more crunch in school lunches.

Schools within a 50-mile radius of any Whole Foods store were eligible to apply for free salad bar equipment from Sept. 1 to Nov. 15, 2010. The company raised more than \$1.4 million to fund the project from donations made online and in its 300-plus stores. The project has selected 564 schools across the U.S. to receive salad bars that will be shipped in February 2011.

Each of the schools will receive a portable, five-well salad bar with utensils, pan inserts, chilling pads and training tools. The

schools had to receive approval for the project from district officials and commit to use the salad bar as part of their lunch programs for at least two years.

Texas schools are embracing the salad bar concept as a way to introduce children to healthy lunch options. Del Valle Independent School District’s (ISD’s) Child Nutrition Department sponsors a one-day annual “A-Z” salad bar at Baty Elementary School. Program organizers bring in salad bar items representing every letter of the alphabet to expose children to new fruits and vegetables.

For more information on the Great American Salad Bar project, visit <http://www.saladbarproject.org/>.

passed The Healthy Meals for Healthy Americans Act. This act established improved meal and nutrition standards for subsidized school food programs, requiring that school lunches provide a third of a child’s recommended daily allowance of nutrients, and that breakfasts provide a fourth.<sup>78</sup>

Despite USDA’s efforts, the continuing expansion of FMNVs into schools and other lifestyle factors had a measurable effect on children. In 2004, the Institute of Medicine of the National Academies noted:

Over the past three decades, the childhood obesity rate has more than doubled for preschool children aged 2-5 years and adolescents aged 12-19 years, and it has more than tripled for children aged 6-11 years.<sup>79</sup>

A significant victory came in May 2006, however, when the American Bever-

age Association (ABA), the Coca-Cola Company, the Dr Pepper Snapple Group and PepsiCo promised to remove highly sweetened soft drinks from schools and provide lower-calorie options in age-appropriate portions within three years. Although the agreement was voluntary for schools, and existing contracts could continue, many bottlers and schools amended their contracts.

By March 2010, ABA reported “an 88 percent decrease in total beverage calories shipped to schools between the first half of the 2004-05 school year and the first half of the 2009-10 school year.”<sup>80</sup>

### Texas Takes On Obesity

Texas state leaders also have taken action to combat childhood obesity. In July 2003, at the request of then-Texas Agriculture Commissioner Susan Combs and with the support of TEA, Governor Rick Perry requested USDA

transfer responsibility for subsidized meal programs from TEA to TDA.

The state’s waiver application to USDA stated that TDA already had several ongoing child nutrition programs; had “an existing, excellent working relationship with the USDA” in other program areas; already employed the state nutritionist; and had a marketing division that could promote healthy agricultural products.<sup>81</sup> USDA granted temporary approval for this transfer, which became effective almost at once for a three-year period.<sup>82</sup>

In June 2004, TDA issued a Texas Public School Nutrition Policy limiting fat, sugar, fried foods and portion sizes for all grades. Elementary schools could not allow any FMNV, candy or competitive foods on their premises, whether sold or given to schoolchildren, until the end of the last scheduled class. Middle schools could not allow the sale of FMNV or candy until the end of the last lunch period; competitive foods were allowed, but not during



meal periods. High school students could purchase FMNV, candy and competitive foods on campus as long as they were sold outside of areas where meals are served or consumed. The policy also set a goal of ensuring that no more than 30 percent of the beverages sold in on-campus vending machines are sugared and carbonated.<sup>83</sup>

In fall 2006, TDA revised Texas' policy, further reducing children's on-campus access to fatty and sugared foods. Elementary school children now have on-campus access only to water, milk and pure juice, and no access to deep-fried foods, although foods partially fried by the manufacturer are acceptable if heated or baked without added fat. Middle school children likewise cannot have deep-fried foods, FMNV or any candy until after the last class and cannot have competitive foods within 30 minutes of meal periods. No more than 30 percent of vended beverage selections on high school campuses can be sweetened and carbonated, and no FMNVs or candy are allowed until after the last class.<sup>84</sup>

## Other Texas Initiatives

The Texas Legislature continues to take an active role in addressing the issue of childhood obesity.

### PHYSICAL EDUCATION

Play at recess and physical education (PE) are important parts of a child's school day — or should be.

Before 2007, the State Board of Education had statutory authority to recommend but not require physical activity standards for Texas school districts.

The 2007 Texas Legislature changed this situation with Senate Bill 530, which obligated school districts to require children in kindergarten through fifth grade (K-5) to participate in "moderate or vigorous" physical activity at least 30 minutes each day. S.B. 530 also requires the same of school-

children in grades six through eight for at least four semesters. The law allows school districts some flexibility to set alternate standards, depending on how they schedule class time and extracurricular activities.

In what turned out to be a groundbreaking step, S.B. 530 also required each school district to annually measure the physical fitness of students in grades three through eight. The law's provisions allow parents to see their child's results, and require districts to report aggregated rather than individual student fitness information to TEA.<sup>85</sup>

### FITNESSGRAM®

In 2008, Texas became the first state to employ a new physical fitness test, the Fitnessgram®, a tool developed by the Cooper Institute of Dallas. Fitnessgram is a software program that assesses physical fitness by measuring body composition, aerobic capacity, strength, endurance and flexibility, and compares the results to age-appropriate, research-based fitness standards.<sup>86</sup> The Fitnessgram test was used to assess the physical fitness of more than 2.4 million Texas students representing 84 percent of school districts. The Cooper Institute and others raised \$2.5 million in private funds to cover the costs of the first Fitnessgram study.

The 2008 assessment found that 33 percent of third-grade girls and 28 percent of third-grade boys were in what the Institute calls the "Healthy Fitness Zone," a term that denotes that students have passed all six fitness tests. The older the students were, however, the worse their fitness levels. In seventh grade, just 21 percent of the girls and 17 percent of boys met the standard. Among high school seniors, only 8 percent of girls and 9 percent of boys fell into the "fit" category.<sup>87</sup>

In 2009, TEA and the Cooper Institute correlated Fitnessgram data with school district data on academic performance, disciplinary incidents and attendance.

This Texas Youth Fitness Study, as it is known, found "significant associations" between physical fitness and high academic performance, low numbers of disciplinary incidents and low absenteeism. Students with high cardiovascular fitness or low BMIs also tended to do well on the Texas Assessment of Knowledge and Skills.<sup>88</sup>

Fitnessgram results for the 2009-10 school year were encouraging but mixed. Students in grades three through nine showed marked improvement compared to the 2008 results, but high school students showed a decline in fitness (**Exhibit 13**).<sup>89</sup>

### TEXAS FITNESS NOW

The 2007 Legislature also appropriated \$20 million for a new two-year Texas Fitness Now program led by Comptroller Susan Combs and TEA.<sup>90</sup> Texas Fitness Now provides grants of at least \$1,500 to middle schools with 75 percent or more of their students coming from economically disadvantaged backgrounds. Qualifying schools that apply for these grants can receive more aid based on enrollment.

To be eligible for the grants, schools must require their students to be physically active throughout the school year for at least 30 minutes each day or 225 minutes over a two-week period, in addition to other physical fitness and administrative requirements.

Texas Fitness Now grants allow schools to improve their PE programs, curricula and equipment (outside of any established team sports program). A quarter of each grant must support nutrition education.<sup>91</sup>

The 2009 Legislature extended the program, appropriating another \$10 million annually for the 2010-11 and 2011-12 school years.<sup>92</sup> Since its inception, Texas Fitness Now has provided grants to at least 379 school districts and charter schools. Houston ISD received the most aid in the program's first three years, at \$2.7 million.<sup>93</sup>



EXHIBIT 13

### **Fitnessgram® Test Results (Share in the Healthy Fitness Zone on All Six Tests)**

#### **2007-2008 School Year**

Grade	Total Tested	Girls (%)	Boys (%)
3	102,342	33.3	28.6
4	80,539	28.5	21.1
5	66,798	23.8	17.9
6	60,663	23.1	17.6
7	55,441	21.3	17.3
8	48,971	19.0	17.9
9	39,456	13.9	15.0
10	28,650	12.4	13.7
11	21,152	10.7	12.2
12	13,040	8.2	9.0

#### **2008-2009 School Year**

Grade	Total Tested	Girls (%)	Boys (%)
3	116,096	36.4	30.9
4	95,842	33.5	24.6
5	79,281	28.0	20.9
6	75,610	28.2	20.6
7	66,950	26.0	19.6
8	60,004	22.3	19.8
9	46,206	16.3	16.1
10	32,865	13.3	13.9
11	24,416	11.1	12.2
12	15,468	8.8	9.3

#### **2009-2010 School Year**

Grade	Total Tested	Girls (%)	Boys (%)
3	119,401	37.3	31.0
4	102,709	34.2	25.3
5	87,389	30.1	21.8
6	83,982	30.2	27.7
7	76,555	28.1	21.4
8	67,218	24.2	21.6
9	48,278	17.0	15.7
10	32,069	13.2	13.0
11	23,431	10.6	11.1
12	15,214	8.1	8.5

Source: Texas Education Agency.

Beginning with the 2009-10 school year, Texas Fitness Now eligibility requirements were changed to allow schools with 60 percent or more economically disadvantaged students (rather than 75 percent) to qualify for the grants.<sup>94</sup>

### **PE CURRICULA**

While Texas previously required schools to provide PE for kindergarteners through grade 12, the schools were responsible for designing their PE curricula. The 2009 Legislature changed that with the passage of S.B. 891, by Sen. Jane Nelson, which established a statewide definition of PE as well as standard student-teacher ratios for PE classes.

S.B. 891 adopted the standards of the National Association of State Boards of Education to ensure that public school PE programs, beginning with the 2009-10 school year, are:

...sequential, developmentally appropriate and designed, implemented and evaluated to enable students to develop the motor, self-management and other skills, knowledge, attitudes and confidence necessary to participate in physical activity throughout life.

School districts also must ensure that at least half of PE class time consists of moderate or vigorous physical activity in line with students' ability, even those who have disabilities, chronic health issues or other special needs. The student-teacher ratio is capped at 45 to one, unless the district can ensure students' safety at a higher ratio.<sup>95</sup>

### **FARM TO SCHOOL**

In 2009, Texas became one of 24 states dedicating resources to direct locally grown, fresh food products into schools.

The Interagency Farm-to-School Coordination Task Force comprises representatives from TDA, TEA, the Texas Department of State Health Services (DSHS)

and other groups; parents; school food services; agriculture, nutrition and health educators and researchers; and fruit and vegetable producers and distributors. Its responsibilities are to create a database of food producers by locale; assist farmers and ranchers with marketing their goods to schools; and design and update nutrition and food education resources.<sup>96</sup>

### **EARLY CHILDHOOD HEALTH AND NUTRITION INTERAGENCY COUNCIL**

While a number of programs address obesity in school-aged children, few reach children at earlier in life. The 2009 Legislature created the Early Childhood Health and Nutrition Interagency Council to coordinate state efforts to prevent obesity in younger children, particularly those in day care, foster care or early supplemental nutrition programs.<sup>97</sup>

The council, which comprises representatives from several state agencies involved with children and their health, is charged with reviewing current research and comparing Texas children's health status and needs with those of other states; pursuing state and federal funding for health and nutrition promotion in childcare settings; reviewing member agencies' programs for children; and identifying best practices and barriers to nutritional and physical improvement. The council sent its first report to the Legislature in late 2010.<sup>98</sup>

### **Academic Efforts**

The University of Texas Southwestern Medical School in Dallas leads a consortium of research schools called the Taskforce for Obesity Research at Southwestern (TORS). With a \$22.7 million grant from the National Institutes of Health and \$9 million in annual state funding, TORS is studying obesity and human metabolism.<sup>99</sup>

*(text continued on page 36)*

## KIDS TEACHING KIDS: FIGHTING OBESITY ONE SNACK AT A TIME

**T**he Kids Teaching Kids program, a collaborative effort by Medical City Dallas Hospital, the Frisco Independent School District and the Greater Dallas Restaurant Association, has made preparing healthy snacks a snap for Frisco's fourth- and fifth-graders.

Juniors and seniors in Frisco's chapters of ProStart, a nationwide culinary arts careers program, worked alongside a Medical City dietician to develop nutritious, low-fat snacks that elementary students can prepare on their own. That meant no sharp knives, no stove and no microwaving.

As part of Kids Teaching Kids, Frisco's culinary students had to learn the importance of portion size and to read nutrition labels on ingredients. The students produced 20 healthy snack recipes, with fruit, peanut butter and yogurt featured prominently.

For instance, their peanut butter banana spirals — low-fat peanut butter and vanilla yogurt on a fat-free flour tortilla,

topped with sliced bananas and rolled and sliced into spirals — clock in at just 203 calories per serving, with 7.1 grams of fat.

The recipes were taste-tested by Shawnee Elementary students. Frisco ISD graphic design students designed a cookbook based on the recipes that was distributed to all fourth- and fifth-graders in the district in May 2010. Medical City recruited a local business to sponsor production of the free cookbook.

Kids Teaching Kids plans to expand beyond North Texas, partnering with the Texas Restaurant Association to bring the program to more schools in 2011.

For more information on Kids Teaching Kids, visit <http://www.medicalcityhospital.com/>.

## CREATING FIT CAMPUSES

**A** new initiative by Texas-based H-E-B, one of the nation's largest grocery chains, encourages Texas kids to make healthy food choices for life.

In October 2010, H-E-B launched a pilot program, Better Choices for Better Health, in 10 schools of San Antonio's Northeast Independent School District.

The yearlong pilot began with a high-energy pep rally at Castle Hills Elementary, and the issuance of green wristbands intended to remind students of their pledge to make better food choices and incorporate physical activity into their daily routines. Better Choices will measure the health of students, their parents and school staff, awarding \$5,000 to the school that achieves the best results. A separate \$5,000 award will be given to a school that achieves the greatest success in involving the community in its program.

H-E-B has established a similar program at eight campuses in Houston's Spring Branch ISD.

The company also sponsors a grant program honoring campus commitments to healthy living. The H-E-B Excellence in Education Fit Campus Award, open to all public and private school campuses within 60 miles of an H-E-B or Central Market store, will provide 10 \$10,000 grants that can be used to create a new health and fitness program or enhance an existing one.

The 10 campuses that best increase their children's health through nutrition and fitness programs will be named grant winners in May 2011.

For more information about H-E-B's FIT Campus Awards, visit <http://www.heb.com/sectionpage/about-us/community/excellence-in-education/26501118>. For a FIT Campus application, visit [www.heb.com/static/pdfs/EIE%20Fit%20Campus%20Application.pdf](http://www.heb.com/static/pdfs/EIE%20Fit%20Campus%20Application.pdf).

## CATCH WORKS TO REDUCE CHILDHOOD OBESITY

**A** consistently effective weapon in Texas' fight against childhood obesity is the Coordinated Approach To Child Health (CATCH), a program first developed in the 1990s by a consortium of institutions including the University of Texas Health Science Center at Houston. Texas public schools use CATCH to improve children's health by promoting physical activity, encouraging healthy food choices and preventing tobacco use in elementary-aged children.<sup>100</sup>

As of July 2010, more than 2,500 elementary schools in Texas were using CATCH methods. Due to its success in Texas, more than 7,000 schools in 22 states, Washington, D.C. and Canada have adopted the program as well.

CATCH's premise is simple: teach young children, their families and members of their community that eating fresh, healthy foods and exercising are fun. The program includes classroom and physical education curricula, child nutrition services and family involvement.

CATCH begins in kindergarten with a basic health class and an introduction to nutrition, progressing to eighth-grade classes in heart health and diabetes education. At every age, school food service programs, "reinforcement" classes, physical activities and family and after-school events are used to provide nutrition information.<sup>101</sup>

Preschoolers participate in moderate to vigorous physical activity combined with music, hand puppets and vocabulary

keywords in English, Spanish and French. Cartoon characters teach youngsters about healthy eating, physical activity and tobacco avoidance. Children through third grade are encouraged to take information about what they have learned home to encourage family participation. By fourth grade, children study diabetes prevention; in fifth grade, they learn about tobacco avoidance.<sup>102</sup>

CATCH teachers require special training. Program materials, including posters, booklets, games and take-home information, cost from \$1.48 to \$7.38 per child. In Travis County, startup costs for 97 schools introducing the program over four years were \$5,000 per school for training support and materials and another \$1,500 annually to replace materials; these costs, moreover, do not include teacher and support staff salaries, training or program evaluations.<sup>103</sup>

For that reason, part of CATCH's success has been generous private funding. In Austin, the Michael and Susan Dell Center for Advancement of Healthy Living has provided three grants totaling \$5.9 million to offer the program through all schools in the Austin Independent School District.<sup>104</sup>

In El Paso, the Paso del Norte Health Foundation supplied \$4.2 million from 1999 to 2006 to introduce the program in El Paso and Hudspeth counties in Texas, and Doña Ana and Otero counties in New Mexico.<sup>105</sup> In 2005, the Houston Endowment Inc. gave \$2.4 million to implement CATCH in all 400 schools in the Houston Independent School District.<sup>106</sup>

Dr. Jay Horton, director of the task force and a professor of internal medicine and molecular genetics at UT Southwestern, says many exciting discoveries related to metabolism and diabetes control are receiving attention. For example, task force researchers discovered that the human hormone leptin appears to be useful in controlling Type 1 diabetes, a finding that could fundamentally change diabetes treatment.<sup>107</sup>

Another significant discovery concerns a protein called PCSK9 that interferes with

the liver's ability to remove heart-clogging cholesterol from the body. Dr. Horton says early tests indicate that a drug designed to counteract PCSK9 could lower blood cholesterol more than 50 percent.<sup>108</sup>

The University of Texas Health Science Center at Houston and the Michael and Susan Dell Foundation partnered in 2006 to create the Center for Healthy Living at the UT School of Public Health's Austin campus. The center has created the Coordinated Approach To Child Health (CATCH) program "to

promote physical activity, healthy food choices, and prevent tobacco use in elementary school aged children."<sup>109</sup>

A cost-effectiveness study on CATCH indicated that the program returns \$889.68 for every dollar invested, as measured by the extension of quality years of life and the avoidance of \$68,125 in future health care costs for each participant.<sup>110</sup> (See sidebar above for more information on CATCH.)

## DELL CHILDREN'S TEXAS CENTER FOR THE PREVENTION AND TREATMENT OF CHILDHOOD OBESITY

**A** new leader in the field of childhood obesity opened in April 2010 at Dell Children's Medical Center in Austin. Headed by Dr. Stephen Pont, the Texas Center for the Prevention and Treatment of Childhood Obesity focuses on reversing obesity trends in children and reducing long-term illnesses caused by obesity. The Center supports both children and their families through a multi-disciplinary, family-based approach.

The Texas Center for the Prevention and Treatment of Childhood Obesity includes four **CL•E•A•R** components: evidence based multidisciplinary **CL**inical treatment; patient, community, and student/trainee **E**ducation; community **A**dvocacy and capacity building; and novel **R**esearch to advance knowledge, document success and expand services.

Dell Children's obesity center incorporates its best practices through its grant funded after-school program, "Healthy Living Happy Living" ("Vida Sana Vida Feliz" for Spanish-speakers) and through its multidisciplinary weight management clinic ACES (Activating Children Empowering Success). Healthy



A NEW LEADER IN THE FIELD OF  
**CHILDHOOD OBESITY** OPENED  
IN APRIL 2010 AT DELL CHILDREN'S  
MEDICAL CENTER IN AUSTIN.

Living Happy Living serves overweight and obese children aged six to 11 and their parents or guardians. The 10-week program focuses on empowering children and their families to make lifelong healthy changes. Program sessions are available in both English and Spanish. The 10-week classes work with 15 to 20 children at a time as well as their parents or guardians. About every three months, the center hosts a "reunion" to check in with participants. Although the classes do not emphasize the participants' performance, Dr. Kimberly Avila Edwards, the program's medical director and ACES Clinic pediatrician, says they see health improvements in parents and kids alike due to the family-oriented approach. The ACES Clinic provides comprehensive evaluation, psychosocial support and treatment for obese children and teens. Mental health concerns, including depression and low self-esteem, frequently challenge the Center's patients and are addressed under the direction of the Center's child psychologist, Dr. Jane Gray.

Dell Children's obesity center also works with the Austin Independent School District, through Children's/AISD Student Health Services, which provides 113 schools with more than 60 full-time school health assistants and 75 full- and part-time registered nurses. These professionals, employed by Dell Children's Medical Center, offer a broad spectrum of health services including diabetes screening, body-mass indexing and case management to more than 87,000 students, many of whom lack health insurance. For more information on the Texas Center for the Prevention and Treatment of Childhood Obesity, visit: <http://www.dellchildrens.net/healthyliving>.





# ENDNOTES

- <sup>1</sup> U.S. Centers for Disease Control and Prevention, "No State Has Met 2010 National Goal of 15 Percent Adult Obesity Prevalence," Atlanta, Georgia, August 3, 2010, <http://www.cdc.gov/media/pressrel/2010/r100803.htm> (press release); "Behavioral Risk Factor Surveillance System: Prevalence and Trends Data: Overweight and Obesity (BMI)-2009," <http://apps.nccd.cdc.gov/brfss/list.asp?cat=OB&yr=2009&qkey=4409&state=All>, custom queries created; and Texas Department of State Health Services, "Texas Overweight and Obesity Statistics," *DSHS Obesity Data Sheet* (May 2010), <http://www.dshs.state.tx.us/obesity/pdf/DataFacts.pdf>. (Last visited January 28, 2011.)
- <sup>2</sup> U.S. Centers for Disease Control and Prevention, "Health Topics: Childhood Obesity," <http://www.cdc.gov/HealthyYouth/obesity/>; "Behavioral Risk Factor Surveillance System: Prevalence and Trends Data: All States-2009," <http://apps.nccd.cdc.gov/brfss/page.asp?cat=OB&yr=2009&state=All#OB>, custom queries; Trust for America's Health and the Robert Wood Johnson Foundation, *F as in Fat: How Obesity Policies are Failing in America*, 2009, by Jeffrey Levi, Serena Vinter, Liz Richardson, Rebecca St. Laurent and Laura M. Segal (Washington, D.C., July 2009), p. 7, <http://healthyamericans.org/reports/obesity2009/Obesity2009Report.pdf>; Gopal K. Singh, Michael D. Kogan, and Peter C. van Dyck, "Changes in State-Specific Childhood Obesity and Overweight Prevalence in the United States From 2003 to 2007," *Archive of Pediatric and Adolescent Medicine* (May 3, 2010), p. E3; American Heart Association, "Overweight in Children," [http://www.heart.org/HEARTORG/GettingHealthy/Overweight-in-Children\\_UCM\\_304054\\_Article.jsp](http://www.heart.org/HEARTORG/GettingHealthy/Overweight-in-Children_UCM_304054_Article.jsp); and Catharine Paddock, "2 in 5 Kids in New York Are Overweight Or Obese," *Medical News Today* (September 6, 2010), <http://www.medicalnewstoday.com/articles/200097.php>. (Last visited January 28, 2011.)
- <sup>3</sup> Eric A. Finkelstein, Justin G. Trogdon, Joel W. Cohen and William Dietz, "Annual Medical Spending Attributable To Obesity: Payer- And Service-Specific Estimates," *Health Affairs* (July 27, 2009), pp. W826 and W828-W829, <http://obesity.procon.org/sourcefiles/FinkelsteinAnnualMedicalSpending.pdf>; and Eric A. Finkelstein, Ian C. Fiebelkorn and Guijing Wang, "National Medical Spending Attributable To Overweight and Obesity: How Much, And Who's Paying?" *Health Affairs* (May 14, 2003), p.W3-223, <http://content.healthaffairs.org/cgi/content/full/hlthaff.w3.219v1/DC1>; Kenneth E. Thorpe, Curtis S. Florence, David H. Howard and Peter Joski, "The Rising Prevalence of Treated Disease: Effects on Private Health Insurance Spending," *Health Affairs* (June 27, 2005), p. W5-322; Texas State Data Center and Office of the State Demographer, *Obesity, Overweight and Normal Weight Projections for the State of Texas, 2007 to 2030* (San Antonio, Texas, August 2010), p. 1; and Reuters Health, "Obesity Tied to Early Heart Attack," *Journal of the American College of Cardiology* (September 16, 2008), <http://www.reuters.com/article/idUSTRE49884O20081009>. (Last visited January 28, 2011.)
- <sup>4</sup> Martin-J. Sepulveda, Fan Tait, Edward Zimmerman and Dee Edington, "Impact of Childhood Obesity on Employers," *Health Affairs* (March 2010), pp. 513 and 515-516.
- <sup>5</sup> Wellspring Camps, "Cost of Obesity," [http://www.wellspringcamps.com/childhood\\_obesity\\_cost/](http://www.wellspringcamps.com/childhood_obesity_cost/). (Last visited January 27, 2011.)
- <sup>6</sup> John Donovan and Cynthia McFadden, "Accommodating Obese Patients," *ABC Nightline*, November 18, 2010, <http://abcnews.go.com/Nightline/video/accommodating-obese-patients-12187791>. (Last visited January 27, 2011.)
- <sup>7</sup> Andrew L. Dannenberg, Deron C. Burton and Richard J. Jackson, "Economic and Environmental Costs of Obesity: The Impact on Airlines," *American Journal of Preventive Medicine* (2004), p. 27.
- <sup>8</sup> Sheldon H. Jacobson and Douglas M. King, "Measuring the Potential for the Automobile Fuel Savings in the U.S.: The Impact of Obesity," *Transportation Research Part D* (2009), pp. 6-13.
- <sup>9</sup> U.S. Centers for Disease Control and Prevention, "Behavioral Risk Factor Surveillance System: Prevalence and Trends Data: All States-2009," <http://apps.nccd.cdc.gov/brfss/page.asp?cat=OB&yr=2009&state=All#OB>. (Last visited December 17, 2010.) Custom queries created.
- <sup>10</sup> Texas State Data Center and Office of the State Demographer, *Obesity, Overweight and Normal Weight Projections for the State of Texas, 2007 to 2030* (San Antonio, Texas, August 2010), p. 1.
- <sup>11</sup> Eric A. Finkelstein, Justin G. Trogdon, Joel W. Cohen and William Dietz, "Annual Medical Spending Attributable To Obesity: Payer- And Service-Specific Estimates," *Health Affairs* (July 27, 2009), p. w829, <http://obesity.procon.org/sourcefiles/FinkelsteinAnnualMedicalSpending.pdf>; and Eric A. Finkelstein, Ian C. Fiebelkorn and Guijing Wang, "National Medical Spending Attributable To Overweight and



- Obesity: How Much, And Who's Paying?" *Health Affairs* (May 14, 2003), p.W3-223, <http://content.healthaffairs.org/cgi/content/full/hlthaff.w3.219v1/DC1>. (Last visited December 17, 2010.)
- <sup>12</sup> U.S. Department of Health and Human Services, *Prevention Makes Common "Cents,"* (Washington, D.C., September 2003), <http://aspe.hhs.gov/health/prevention/>; and Texas Department of State Health Services, *Building Healthy Texans: A Guide to Lower Health Care Costs and More Productive Employees* (Austin, Texas), p. 6, <http://www.dshs.state.tx.us/wellness/PDF/healthytexans.pdf>. (Last visited January 4, 2011.)
  - <sup>13</sup> World Health Organization, "Obesity and Overweight," <http://www.who.int/dietphysicalactivity/publications/facts/obesity/en/>. (Last visited January 4, 2011.)
  - <sup>14</sup> T. Kelly, W. Yang, C.S. Chen, K. Reynolds and J. He, "Global Burden of Obesity in 2005 and Projections to 2030," *International Journal of Obesity* (2008), p. 1435.
  - <sup>15</sup> U.S. Centers for Disease Control and Prevention, "Behavioral Risk Factor Surveillance System: Prevalence and Trends Data: Overweight and Obesity (BMI)-2009," <http://apps.nccd.cdc.gov/brfss/list.asp?cat=OB&yr=2009&qkey=4409&state=All>; and Texas Department of State Health Services, "Texas Overweight and Obesity Statistics," *DSHS Obesity Data Sheet* (May 2010), <http://www.dshs.state.tx.us/obesity/pdf/DataFacts.pdf>. (Last visited January 4, 2011.)
  - <sup>16</sup> U.S. Centers for Disease Control and Prevention, "Behavioral Risk Factor Surveillance System: Prevalence and Trends Data: Overweight and Obesity (BMI)-2009," custom queries made; and e-mail communication from Michelle L. Cook, epidemiologist III/BRFSS coordinator, Texas Department of State Health Services, July 21, 2010.
  - <sup>17</sup> U.S. Centers for Disease Control and Prevention, "Health Topics: Childhood Obesity," <http://www.cdc.gov/HealthyYouth/obesity/>. (Last visited January 5, 2011.)
  - <sup>18</sup> American Academy of Child & Adolescent Psychiatry, "Obesity in Children and Teens," *Facts for Families* (May 2008), [http://www.aacap.org/cs/root/facts\\_for\\_families/obesity\\_in\\_children\\_and\\_teens](http://www.aacap.org/cs/root/facts_for_families/obesity_in_children_and_teens); and Texas Department of State Health Services, *Strategic Plan for the Prevention of Obesity in Texas: 2005-2010* (Austin, Texas, March 10, 2006), p. 13, [http://www.dshs.state.tx.us/obesity/pdf/strategic\\_plan.pdf](http://www.dshs.state.tx.us/obesity/pdf/strategic_plan.pdf). (Last visited January 5, 2011.)
  - <sup>19</sup> Trust for America's Health and the Robert Wood Johnson Foundation, *F as in Fat: How Obesity Policies are Failing in America, 2009*, by Jeffrey Levi, Serena Vinter, Liz Richardson, Rebecca St. Laurent and Laura M. Segal (Washington, D.C., July 2009), p. 7, <http://healthymamericans.org/reports/obesity2009/Obesity2009Report.pdf> (last visited January 5, 2011); and Gopal K. Singh, Michael D. Kogan, and Peter C. van Dyck, "Changes in State-Specific Childhood Obesity and Overweight Prevalence in the United States From 2003 to 2007," *Archive of Pediatric and Adolescent Medicine* (May 3, 2010), p. E3.
  - <sup>20</sup> Gopal K. Singh, Michael D. Kogan, and Peter C. van Dyck, "Changes in State-Specific Childhood Obesity and Overweight Prevalence in the United States From 2003 to 2007," pp. E3 and E7.
  - <sup>21</sup> U.S. Centers for Disease Control and Prevention, "Behavioral Risk Factor Surveillance System: Prevalence and Trends Data: Texas – 2009 Overweight and Obesity (BMI) - Age Grouping," <http://apps.nccd.cdc.gov/brfss/age.asp?cat=OB&yr=2009&qkey=4409&state=TX>. (Last visited January 5, 2011.)
  - <sup>22</sup> U.S. Centers for Disease Control and Prevention, "Behavioral Risk Factor Surveillance System: Prevalence and Trends Data: Texas – 2009 Overweight and Obesity (BMI) – Race Grouping," <http://apps.nccd.cdc.gov/brfss/race.asp?cat=OB&yr=2009&qkey=4409&state=TX>. (Last visited January 5, 2011.)
  - <sup>23</sup> Sonia Caprio, Stephen R. Daniels, Adam Drewnowski, Francine R. Kaufman, Lawrence A. Palinkas, Arlan L. Rosenbloom and Jeffrey B. Schwimmer, "Influence of Race, Ethnicity and Culture on Childhood Obesity: Implications for Prevention and Treatment: A Consensus Statement of Shaping America's Health and the Obesity Society," *Diabetes Care* (November 2008), pp. 2,212; and Gopal K. Singh, Michael D. Kogan, and Peter C. van Dyck, "Changes in State-Specific Childhood Obesity and Overweight Prevalence in the United States From 2003 to 2007," p. E7.
  - <sup>24</sup> Methodist Healthcare Ministries of South Texas and Texas Health Institute, *Summary: Findings About the Obesity Epidemic in Texas*, by Karl Eschbach and Vincent Fonseca (San Antonio, Texas, January 2009), [http://txsdc.utsa.edu/download/pdf/obesity/THI\\_Obesity\\_Summary.pdf](http://txsdc.utsa.edu/download/pdf/obesity/THI_Obesity_Summary.pdf). (Last visited January 6, 2011.)
  - <sup>25</sup> U.S. Department of Health and Human Services, "Childhood Obesity," [http://aspe.hhs.gov/health/reports/child\\_obesity/](http://aspe.hhs.gov/health/reports/child_obesity/). (Last visited January 6, 2011.)
  - <sup>26</sup> U.S. Centers for Disease Control and Prevention, "Behavioral Risk Factor Surveillance System: Prevalence and Trends Data: Texas – 2009 Overweight and Obesity (BMI) – Education Grouping," <http://apps.nccd.cdc.gov/brfss/education.asp?cat=OB&yr=2009&qkey=4409&state=TX>. (Last visited January 6, 2011.)
  - <sup>27</sup> U.S. Department of Health and Human Services, "Childhood Obesity."
  - <sup>28</sup> U.S. Centers for Disease Control and Prevention, "Behavioral Risk Factor Surveillance System: Prevalence and Trends Data: Texas – 2009 Overweight and Obesity (BMI) – Income Grouping," <http://apps.nccd.cdc.gov/brfss/income.asp?cat=OB&yr=2009&qkey=4409&state=TX>. (Last visited January 6, 2011.)
  - <sup>29</sup> Texas Department of State Health Services, "Behavioral Risk Factor Surveillance System: Data Table Lookup," [http://www.dshs.state.tx.us/chs/brfss/query/brfss\\_form.shtm](http://www.dshs.state.tx.us/chs/brfss/query/brfss_form.shtm). (Last visited July 21, 2010.) Custom queries for 2009.
  - <sup>30</sup> U.S. Centers for Disease Control and Prevention, "About BMI for Adults," [http://www.cdc.gov/healthyweight/assessing/bmi/adult\\_bmi/index.html](http://www.cdc.gov/healthyweight/assessing/bmi/adult_bmi/index.html); Arno J. Krul, Hein A.M. Daanen and Hyegjoo Choi, "Self-Reported and Measured Weight, Height and Body Mass Index (BMI) in Italy, the Netherlands and North America," *European Journal of Public Health* (January 20, 2010); and U.S. Centers for Disease Control and Prevention, "About BMI for Children and Teens," [http://www.cdc.gov/healthyweight/assessing/bmi/childrens\\_bmi/about\\_childrens\\_bmi.html](http://www.cdc.gov/healthyweight/assessing/bmi/childrens_bmi/about_childrens_bmi.html). (Last visited January 5, 2011.)
  - <sup>31</sup> Center for Science in the Public Interest, "Snack Nation," *Nutrition Action Health Letter* (May 1, 2010), <http://www.faqs.org/periodicals/201005/2022316541.html>. (Last visited January 13, 2011.)
  - <sup>32</sup> Carmen Piernas and Barry M. Popkin, "Trends in Snacking Among U.S. Children," *Health Affairs* (March 2010), pp. 398-400; and Lisa R. Young and Marion Nestle, "The Contribution of Expanding Portion Sizes to the US Obesity Epidemic," *American Journal of Public Health* (February 2002), pp. 246-247, <http://steinhardt.nyu.edu/nutrition.olde/PDFS/young-nestle.pdf>. (Last visited January 13, 2011.)
  - <sup>33</sup> Center for Science in the Public Interest, "Snack Nation," ; Kelly D. Brownell and Thomas R. Frieden, "Ounces of Prevention:

- The Public Policy Case for Taxes on Sugared Beverages,” *New England Journal of Medicine* (April 30, 2009), pp. 1805-1806; and California Center for Public Health Advocacy, “Sugar-Sweetened Beverages: Extra Sugar, Extra Calories and Extra Weight,” [http://www.publichealthadvocacy.org/PDFs/Soda\\_Fact\\_Sheet.pdf](http://www.publichealthadvocacy.org/PDFs/Soda_Fact_Sheet.pdf). (Last visited January 13, 2011.)
- <sup>34</sup> U.S. Government Accountability Office, *School Meal Programs: Competitive Foods are Widely Available and Generate Substantial Revenues for Schools* (Washington, D.C., August 2005), pp. 14-18, <http://www.gao.gov/new.items/d05563.pdf>. (Last visited January 13, 2011.)
- <sup>35</sup> Robert Wood Johnson Foundation, “Study Shows a Little Money Buys a Lot of Calories at City Corner Stores,” <http://www.rwjf.org/childhoodobesity/product.jsp?id=49609>. (Last visited January 13, 2011.)
- <sup>36</sup> Children Now, *The Impact of Industry Self-Regulation on the Nutritional Quality of Foods Advertized on Television to Children* by Dale Kunkel, Christopher McKinley and Paul Wright (Oakland, California, December 2009), pp. 6-7, [http://www.childrennow.org/uploads/documents/adstudy\\_2009.pdf](http://www.childrennow.org/uploads/documents/adstudy_2009.pdf). (Last visited January 14, 2011.)
- <sup>37</sup> National Center for Chronic Disease Prevention and Health Promotion, Division of Nutrition, Physical Activity and Obesity, “Low-Energy-Dense Foods and Weight Management: Cutting Calories While Controlling Hunger,” *Research to Practice Series* (No. 5), pp. 1-2, [http://www.cdc.gov/nccdpdp/dnpa/nutrition/pdf/r2p\\_energy\\_density.pdf](http://www.cdc.gov/nccdpdp/dnpa/nutrition/pdf/r2p_energy_density.pdf); and “Can Eating Fruits and Vegetables Help People to Manage Their Weight,” *Research to Practice Series* (No. 1), p. 1, [http://www.cdc.gov/nccdpdp/dnpa/nutrition/pdf/rtp\\_practitioner\\_10\\_07.pdf](http://www.cdc.gov/nccdpdp/dnpa/nutrition/pdf/rtp_practitioner_10_07.pdf). (Last visited January 7, 2011.)
- <sup>38</sup> U.S. Centers for Disease Control and Prevention, “Fruit and Vegetable Consumption Among Adults-United States, 2005,” *MMWR Weekly* (March 16, 2007), pp. 213-217, <http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5610a2.htm>; and U.S. Department of Health and Human Services and U.S. Department of Agriculture, *Dietary Guidelines for Americans, 2005*, 6th ed. (Washington, D.C., January 2005), p. 24, <http://www.cnpp.usda.gov/Publications/DietaryGuidelines/2005/2005DGPolyDocument.pdf>. (Last visited January 7, 2011.)
- <sup>39</sup> Brian Wansink and Koert Van Ittersum, “Portion Size Me: Downsizing Our Consumption Norms,” *Journal of the American Dietetic Association* (July 2007), p. 1,103, [http://www.mindlesseating.org/lastsupper/pdf/portion\\_size\\_me\\_JADA\\_2007.pdf](http://www.mindlesseating.org/lastsupper/pdf/portion_size_me_JADA_2007.pdf); and Rutgers, The State University of New Jersey, School of Environmental and Biological Sciences, “‘Portion Distortion’ May Contribute to Expanding Waistlines: Study Reports,” New Brunswick, New Jersey, September 1, 2006, <http://sebs.rutgers.edu/news/release.asp?n=414>. (Last visited January 12, 2011.) (Press release.)
- <sup>40</sup> Kansas State University, “Sizing Up Portions with MyPyramid’s Guidelines,” by Mary Meck Higgins (Manhattan, Kansas, 2005), slides 4, 10, 12, 14, 16 and 20, available in PowerPoint format at [http://www.google.com/url?sa=t&source=web&cd=7&ved=0CCgQFjAG&url=http%3A%2F%2Fwww.ksre.ksu.edu%2Fhumannutrition%2Fportionslides.ppt&ei=sV1gTIfZBcP98Qbg\\_O3JBQ&usq=AFQjCNFXddmPkgbD85B3rlM3L0Zzb7Z\\_nw](http://www.google.com/url?sa=t&source=web&cd=7&ved=0CCgQFjAG&url=http%3A%2F%2Fwww.ksre.ksu.edu%2Fhumannutrition%2Fportionslides.ppt&ei=sV1gTIfZBcP98Qbg_O3JBQ&usq=AFQjCNFXddmPkgbD85B3rlM3L0Zzb7Z_nw). (Last visited August 20, 2010.)
- <sup>41</sup> National Heart, Lung and Blood Institute, “Portion Distortion II Interactive Quiz: Do You Know How Food Portions Have Changed in 20 Years?” slides 3-5, available in PowerPoint format at [http://hp2010.nhlbi.nih.gov/oei\\_ss/PDII/download/pdf/PD2.pdf](http://hp2010.nhlbi.nih.gov/oei_ss/PDII/download/pdf/PD2.pdf) (last visited January 12, 2011); and Kansas State University, “Sizing Up Portions with MyPyramid’s Guidelines,” slides 16-17.
- <sup>42</sup> Hayden Stewart, Noel Blisard and Dean Jolliffe, *Let’s Eat Out: Americans Weigh Taste, Convenience and Nutrition* (Washington, D.C.: U.S. Department of Agriculture, 2006), pp. 1-2, <http://www.ers.usda.gov/publications/eib19/eib19.pdf>. (Last visited January 10, 2011.)
- <sup>43</sup> Thomas A. Wadden, Kelly D. Brownell and Gary D. Foster, “Obesity: Responding to the Global Epidemic,” *Journal of Consulting and Clinical Psychology* (No. 3, 2002), p. 513, [http://www2.warwick.ac.uk/fac/med/study/ugr/mbchb/phase1\\_08/semester2/healthpsychology/integration/obesity.pdf](http://www2.warwick.ac.uk/fac/med/study/ugr/mbchb/phase1_08/semester2/healthpsychology/integration/obesity.pdf). (Last visited January 10, 2011.)
- <sup>44</sup> National Center for Chronic Disease Prevention and Health Promotion, Division of Nutrition, Physical Activity and Obesity, “Incorporating Away-From-Home Food into a Healthy Eating Plan,” *Research to Practice Series* (No. 6), pp. 2-5, [http://www.cdc.gov/nccdpdp/dnpa/nutrition/pdf/r2p\\_away\\_from\\_home\\_food.pdf](http://www.cdc.gov/nccdpdp/dnpa/nutrition/pdf/r2p_away_from_home_food.pdf). (Last visited January 10, 2011.)
- <sup>45</sup> Trust for America’s Health and the Robert Wood Johnson Foundation, *F as in Fat: How Obesity Threatens America’s Future*, 2010, by Jeffrey Levi, Serena Vinter, Rebecca St. Laurent and Laure M. Segal (Washington, D.C., June 2010), pp. 101-105, <http://healthyamericans.org/reports/obesity2010/Obesity2010Report.pdf>; and U.S. Department of Health and Human Services, *Physical Activity Fundamental to Preventing Disease* (Washington, D.C., June 20, 2002), pp. 2, 4 and 8, <http://aspe.hhs.gov/health/reports/physicalactivity/physicalactivity.pdf>. (Last visited January 18, 2011.)
- <sup>46</sup> Trust for America’s Health and the Robert Wood Johnson Foundation, *F as in Fat: How Obesity Policies are Failing in America, 2009*, p. 24; U.S. Centers for Disease Control and Prevention, “How Much Physical Activity Do Adults Need?” <http://www.cdc.gov/physicalactivity/everyone/guidelines/adults.html> (last visited January 18, 2011); and Trust for America’s Health and the Robert Wood Johnson Foundation, *F as in Fat: How Obesity Threatens America’s Future*, 2010, pp. 18 and 105.
- <sup>47</sup> Henry J. Kaiser Family Foundation, “Generation M2: Media in the Lives of 8- to 18-Year Olds,” <http://www.kff.org/entmedia/mh012010pkg.cfm>; Office of the First Lady of the United States, “Let’s Move: America’s Move to Raise a Healthier Generation of Kids,” <http://www.letsmove.gov/getactive.php>; and U.S. Centers for Disease Control and Prevention, “Youth Risk Behavior Surveillance - United States 2009,” *Morbidity and Mortality Weekly Report Surveillance Summaries* (June 4, 2010), p. 122, <http://www.cdc.gov/mmwr/pdf/ss/ss5905.pdf>. (Last visited January 18, 2011.)
- <sup>48</sup> Eric A. Finkelstein, Ian C. Fiebelkorn and Guijing Wang, “National Medical Spending Attributable To Overweight and Obesity: How Much, And Who’s Paying?” p. W3-223; Eric A. Finkelstein, Justin G. Trogdon, Joel W. Cohen and William Dietz, “Annual Medical Spending Attributable To Obesity: Payer-And Service-Specific Estimates,” pp. w828-w829; and United Health Foundation, the American Public Health Association and Partnership for Prevention, *The Future Costs of Obesity: National and State Estimates of the Impact of Obesity on Direct Health Care Expenses*, by Kenneth E. Thorpe (Minnetonka, Minnesota, November 2009), p. 3, <http://www.fightchronicdisease.org/pdfs/CostofObesityReport-FINAL.pdf>. (Last visited January 6, 2011.)
- <sup>49</sup> Kenneth E. Thorpe, Curtis S. Florence, David H. Howard and Peter Joski, “The Impact of Obesity on Rising Medical

- Spending," *Health Affairs* (October 20, 2004), p. W4-483.
- <sup>50</sup> Eric A. Finkelstein, Justin G. Trogon, Joel W. Cohen and William Dietz, "Annual Medical Spending Attributable To Obesity: Payer-And Service-Specific Estimates," p. w826.
- <sup>51</sup> U.S. Centers for Medicare and Medicaid Services, "Health Expenditures by State of Residence: Summary Tables, 1991-2004 (September 2007)," available at [https://www.cms.gov/NationalHealthExpendData/05\\_NationalHealthAccountsStateHealthAccountsResidence.asp#TopOfPage](https://www.cms.gov/NationalHealthExpendData/05_NationalHealthAccountsStateHealthAccountsResidence.asp#TopOfPage). (Last visited January 6, 2011.)
- <sup>52</sup> Texas Comptroller of Public Accounts, *Counting Costs and Calories: Measuring the Cost of Obesity to Texas Employers* (Austin, Texas, March 2007), pp. 13 and 32, <http://www.window.state.tx.us/specialrpt/obesitycost/>. (Last visited January 6, 2011.)
- <sup>53</sup> Marie N. Stagnitti, "Trends in Health Care Expenditures by Body Mass Index (BMI) Category for Adults in the U.S. Civilian Noninstitutionalized Population, 2001 and 2006," *Statistical Brief #247* (July 2009), pp. 1 and 7, [http://www.meps.ahrq.gov/mepsweb/data\\_files/publications/st247/stat247.pdf](http://www.meps.ahrq.gov/mepsweb/data_files/publications/st247/stat247.pdf). (Last visited January 6, 2011.)
- <sup>54</sup> American Heart Association, *Heart Disease and Stroke Statistics: 2010 Update at a Glance* (Dallas, Texas, 2010), pp. 2, 6-8, 12, 25-27 and 33, [http://www.americanheart.org/downloadable/heart/1265665152970DS-3241%20HeartStrokeUpdate\\_2010.pdf](http://www.americanheart.org/downloadable/heart/1265665152970DS-3241%20HeartStrokeUpdate_2010.pdf). (Last visited January 6, 2011.)
- <sup>55</sup> National Cancer Institute, "Obesity and Cancer: Questions and Answers," <http://www.cancer.gov/cancertopics/factsheet/Risk/obesity>; World Cancer Research Fund and American Institute for Cancer Research, *Policy and Action for Cancer Prevention, Food, Nutrition and Physical Activity: A Global Perspective* (Washington, D.C., 2009), pp. 16-18; Shine Chang, Louise C. Masse, Richard P. Moser, Kevin W. Dodd, Facundo Arganaraz, Bernard F. Fuemmler and Ahmedin Jemel, "State Ranks of Incident Cancer Burden due to Overweight and Obesity in the United States, 2003," *Obesity* (July 2008), pp. 1636-1650, <http://www.nature.com/oby/journal/v16/n7/full/oby2008228a.html>; National Heart, Lung, and Blood Institute and National Institute of Diabetes and Digestive and Kidney Diseases, *Clinical Guidelines on the Identification, Evaluation and Treatment of Overweight and Obesity in Adults: The Evidence Report* (Bethesda, Maryland, September 1998), p. 12, [http://www.nhlbi.nih.gov/guidelines/obesity/ob\\_gdlns.pdf](http://www.nhlbi.nih.gov/guidelines/obesity/ob_gdlns.pdf); Texas Department of State Health Services, "Expected New Cancer Cases and Deaths by Primary Site, Texas, 2010," <http://www.dshs.state.tx.us/tcr/Expected/2010expected/2010Expected-statewide.pdf>. (Last visited January 7, 2011.)
- <sup>56</sup> Milken Institute, *An Unhealthy America: The Economic Burden of Chronic Disease-Charting a New Course to Save Lives and Increase Productivity and Economic Growth*, by Ross DeVol and Armen Bedroussian (Santa Monica, California, October 2007), p. 229.
- <sup>57</sup> Eric A. Finkelstein, Justin G. Trogon, Joel W. Cohen and William Dietz, "Annual Medical Spending Attributable To Obesity: Payer-And Service-Specific Estimates," pp. w828-w829; and Kenneth E. Thorpe, Curtis S. Florence, David H. Howard and Peter Joski, "The Rising Prevalence of Treated Disease: Effects on Private Health Insurance Spending," *Health Affairs* (June 27, 2005), p. W5-322.
- <sup>58</sup> John Cawley, John A. Rizzo and Kara Haas, "Occupation-Specific Absenteeism Costs Associated with Obesity and Morbid Obesity," *Journal of Occupational and Environmental Medicine* (December 2007), p. 1,321.
- <sup>59</sup> Eric Finkelstein, Ian C. Fiebelkorn and Guijing Wang, "The Costs of Obesity Among Full-Time Employees," *American Journal of Health Promotion* (September/October 2005), pp. 45 and 50.
- <sup>60</sup> Ronald Loeppke, Michael Taitel, Vince Hauffe, Thomas Parry, Ronald C. Kessler and Kimberly Jinnett, "Health and Productivity as a Business Strategy: A Multiemployer Study," *Journal of Occupational and Environmental Medicine* (April 2009), pp. 411-428, <http://www.vbhealth.org/wp-content/uploads/JOEM-article-4-09-Final.pdf>. (Last visited January 7, 2011.)
- <sup>61</sup> Judith A. Ricci and Elsbeth Chee, "Lost Productive Time Associated with Excess Weight in the U.S. Workforce," *Journal of Occupational and Environmental Medicine* (December 2005), p.1,231.
- <sup>62</sup> H. Claessen, V Arndt, C Drath, H. Brenner, "Overweight, Obesity and Risk of Work Disability: A Cohort Study of Construction Workers in Germany," *Occupational and Environmental Medicine* (2009), pp. 402-409.
- <sup>63</sup> Ron Z. Goetzel, Kevin Hawkins, Ronald J. Ozminkowski and Shaohung Wang, "The Health and Productivity Cost Burden of the 'Top 10' Physical and Mental Health Conditions Affecting Six Large U.S. Employers in 1999," *Journal of Occupational and Environmental Medicine* (January 2003), p. 5; and Texas Comptroller of Public Accounts, *Counting Costs and Calories: Measuring the Cost of Obesity to Texas Employers*, p. 17.
- <sup>64</sup> U.S. Department of Health and Human Services, *Prevention Makes Common Cents*, pp. i-1 and 24; Texas Department of State Health Services, *Building Healthy Texans: A Guide to Lower Health Care Costs and More Productive Employees*; and Katherine Baicker, David Cutler and Zirui Song, "Workplace Wellness Programs Can Generate Savings," *Health Affairs* (February 2010), pp. 1-2 and 4-7; and U.S. Department of Health and Human Services, "7: Educational and Community-Based Programs," in *Healthy People 2010: Volume 1*, 2nd ed. (Washington, D.C., November 2000), p. 7-5.
- <sup>65</sup> Kenneth E. Warner, "Wellness at the Worksite," *Health Affairs* (Summer 1990), p. 71, <http://healthaffairs.org/cgi/reprint/9/2/63.pdf>. (Last visited January 7, 2011.)
- <sup>66</sup> Laura Linnan, Mike Bowling, Jennifer Childress, Garry Lindsay, Carter Blakey, Stephanie Pronk, Sharon Wiekert and Penelope Royall, "Results of the 2004 National Worksite Health Promotion Survey," *American Journal of Public Health* (January 2008), pp. 2-4, <http://ajph.aphapublications.org/cgi/reprint/AJPH.2006.100313v1>; and Joyce Gannon, "Companies Offer Wellness Programs to Cut Insurance Costs," *Pittsburgh Post-Gazette* (May 11, 2008), <http://www.post-gazette.com/pg/08132/880660-28.stm>. (Last visited January 7, 2011.)
- <sup>67</sup> Ron Z. Goetzel and Ronald J. Ozminkowski, "That's Holding Your Back: Why Should (or Shouldn't) Employers Invest in Health Promotion Programs for Their Workers?" *North Carolina Medical Journal* (November/December 2006), p. 429, <http://www.ncmedicaljournal.com/wp-content/uploads/NCMJ/nov-dec-06/Goetzel.pdf>; and Josh Cable, "The ROI of Wellness," *EHS Today: The Magazine for Environment, Health and Safety Leaders* (April 13, 2007), [http://ehstoday.com/health/ehs\\_imp\\_47545/](http://ehstoday.com/health/ehs_imp_47545/). (Last visited January 10, 2011.)
- <sup>68</sup> U.S. Centers for Disease Control and Prevention, "Healthier Worksite Initiative: Introduction," <http://www.cdc.gov/nccdphp/dnpao/hwi/index.htm>; Shirley S. Wang, "J&J Folds Wellness and Prevention Efforts into Consumer Biz," *Wall Street Journal Health Blog* (April 15, 2009), <http://blogs.wsj.com/health/2009/04/15/jj-folds-wellness-and-prevention-efforts-into-consumer-biz/> (last visited January 10, 2011).



- 2011); and Vermont Governor's Council on Physical Fitness and Sports, "Council Honors Employers for Wellness Programs," Burlington, Vermont, September 30, 2008, <http://www.vermontfitness.org/pdf/Wellness%20Awards%2008%20Announce.pdf>. (Last visited August 2, 2010.) (Press release.)
- <sup>69</sup> Catherine A. Heaney and Ron Z. Goetzl, "A Review of Health-related Outcomes of Multi-Component Worksite Health Promotion Programs," *American Journal of Health Promotion* (March-April 1997), pp. 302-303 and 305; and U.S. Department of Health and Human Services, "7: Educational and Community-Based Programs," pp. 7-18 and 7-20.
- <sup>70</sup> Mission: Readiness, *Too Fat to Fight: Retired Military Leaders Want Junk Food Out of America's Schools – A Report by Mission: Readiness, Military Leaders for Kids* (Washington, D.C., April 8, 2010), pp. 1-2, [http://cdn.missionreadiness.org/MR\\_Too\\_Fat\\_to\\_Fight-1.pdf](http://cdn.missionreadiness.org/MR_Too_Fat_to_Fight-1.pdf). (Last visited August 17, 2010.)
- <sup>71</sup> "Obesity Takes its Toll on the Military: Officials Increasingly Worried About Troops Being Too Fat to Fight," *Associated Press* (July 5, 2005), <http://www.msnbc.msn.com/id/8423112/> (last visited August 18, 2010); and Mission: Readiness, *Too Fat to Fight: Retired Military Leaders Want Junk Food Out of America's Schools: A Report by Mission: Readiness, Military Leaders for Kids*, pp. 4-5 and 7.
- <sup>72</sup> Data provided by the Texas Education Agency, January 20, 2011.
- <sup>73</sup> P.L. 79-396, 60 Stat. 230, June 4, 1946.
- <sup>74</sup> Texas Department of Agriculture, "National School Lunch/Breakfast Programs, Program Year July 1, 2008 – June 30, 2009," [http://www.squaremeals.org/vgn/tda/files/2348/36541\\_FND%20summary%20updated.pdf](http://www.squaremeals.org/vgn/tda/files/2348/36541_FND%20summary%20updated.pdf). (Last visited January 12, 2011.)
- <sup>75</sup> U.S. Department of Agriculture, "School Meal Programs 'Lessons Learned' Presentation to Institute of Medicine Food and Nutrition Board Committee on Nutrition Standards in Schools, April 21, 2006," slides 4-20 and 37-38, <http://www.iom.edu/-/media/Files/Activity%20Files/Nutrition/SchoolFoods/Mtg4OpenSessionUSDA.ashx>; and U.S. Centers for Disease Control and Prevention, "SHPPS 2006: School Health Policies and Programs Study," [http://www.cdc.gov/healthyyouth/shpps/2006/factsheets/pdf/FS\\_Overview\\_SHPPS2006.pdf](http://www.cdc.gov/healthyyouth/shpps/2006/factsheets/pdf/FS_Overview_SHPPS2006.pdf). (Last visited January 13, 2011.)
- <sup>76</sup> U.S. Department of Agriculture, "School Meals: Food of Minimal Nutritional Value," <http://www.fns.usda.gov/cnd/menu/fmnv.htm>; "School Meal Programs 'Lessons Learned' Presentation to Institute of Medicine Food and Nutrition Board Committee on Nutrition Standards in Schools, April 21, 2006," slides 6 and 9-20; "What Does It Mean to Establish Nutrition Standards," [http://www.fns.usda.gov/tn/resources/e\\_app1.pdf](http://www.fns.usda.gov/tn/resources/e_app1.pdf); and Committee on Nutrition Standards for Foods in Schools, Food and Nutrition Board, *Nutrition Standards for Foods In Schools: Leading the Way Toward Healthier Youth*, by Virginia A. Stallings and Ann L. Taktine, eds., (Washington, D.C., National Academies Press, 2007), pp. 104-105, <http://search.nap.edu/nap-cgi/skimchap.cgi?recid=11899&chap=103-116>. (Last visited January 13, 2011.)
- <sup>77</sup> *National Soft Drink Association v. R. Block*, 721 F.2d 1328 (D.C. Cir. 1983).
- <sup>78</sup> Charlene Price and Betsey Kuhn, "Public and Private Efforts for the National School Lunch Program," Food Review (May-August 1996), p. 55, <http://www.ers.usda.gov/publications/foodreview/may1996/may96i.pdf>. (Last visited January 13, 2011.)
- <sup>79</sup> Institute of Medicine of the National Academies, "Childhood Obesity in the United States: Facts and Figures," *Fact Sheet* (September 2004), [http://www.activelivingresources.org/assets/Childhood\\_obesity\\_fact\\_sheet.pdf#search=%22childhood%20obesity%20facts%22](http://www.activelivingresources.org/assets/Childhood_obesity_fact_sheet.pdf#search=%22childhood%20obesity%20facts%22). (Last visited January 13, 2011.)
- <sup>80</sup> American Beverage Association, *Alliance School Beverage Guidelines Final Progress Report* (Washington, D.C., March 8, 2010), pp. iv-v, [http://www.healthiergeneration.org/uploadedFiles/About\\_The\\_Alliance/SBG%20FINAL%20PROGRESS%20REPORT%20\(March%202010\).pdf](http://www.healthiergeneration.org/uploadedFiles/About_The_Alliance/SBG%20FINAL%20PROGRESS%20REPORT%20(March%202010).pdf). (Last visited January 14, 2011.)
- <sup>81</sup> Letter from Robert Scott, chief deputy commissioner, Texas Education Agency, and Susan Combs, commissioner, Texas Department of Agriculture, to Texas Governor Rick Perry, 2003; and letter from Texas Governor Rick Perry to William Ludwig, U.S. Department of Agriculture, July 3, 2003, pp. 1-2, with attachment, "Application for Waiver," pp. 2-3.
- <sup>82</sup> Letter from William Ludwig, regional administrator, U.S. Department of Agriculture, to Texas Governor Rick Perry, July 17, 2003, p. 1.
- <sup>83</sup> Texas Department of Agriculture, *Texas Public School Nutrition Policy (Updated to Include all Clarifications and Exemptions), Effective August 1, 2004* (Austin, Texas, June 1, 2004), pp. 3-11, <http://www.harlingen.isd.tenet.edu/news/foodnutritionpolicy.pdf>. (Last visited January 14, 2011.)
- <sup>84</sup> Texas Department of Agriculture, *Texas Public School Nutrition Policy (Updated to Include all Clarifications and Exemptions), Policy Originally Effective August 1, 2004, Revisions Effective August 1, 2007* (Austin, Texas, 2006), pp. 3-11, [http://www.squaremeals.org/vgn/tda/files/2348/14616\\_TPSNP%20SY%2007-08%20re.pdf](http://www.squaremeals.org/vgn/tda/files/2348/14616_TPSNP%20SY%2007-08%20re.pdf); and School Nutrition Association, "Summary of State School Nutrition Standards," pp. 52-55, [http://www.schoolnutrition.org/uploadedFiles/School\\_Nutrition/106\\_LegislativeAction/PoliciesAndRegulations/Summary%20of%20State%20Nutrition%20Standards%20May%202009.doc?n=3863](http://www.schoolnutrition.org/uploadedFiles/School_Nutrition/106_LegislativeAction/PoliciesAndRegulations/Summary%20of%20State%20Nutrition%20Standards%20May%202009.doc?n=3863). (Last visited January 14, 2011.)
- <sup>85</sup> Texas S.B. 530, 80th Leg., Reg. Sess. (2007).
- <sup>86</sup> Cooper Institute, "Fitnessgram Program Overview," <http://www.fitnessgram.net/programoverview/>; Texas Education Agency, "Texas Tests Fitness of 2.6 Million Students; Finds Elementary Students Are in Best Shape," *Texas Education Agency News*, pp. 1-2, (July 1, 2008), [http://www.cooperinstitute.org/ourkidshealth/news/documents/TEA\\_News\\_Release7-1-08.pdf](http://www.cooperinstitute.org/ourkidshealth/news/documents/TEA_News_Release7-1-08.pdf); and James A. Hodgdon, *A History of the U.S. Navy Physical Readiness Program from 1976 to 1999*, (San Diego, California: Naval Health Research Center, 1999), pp. 3-4, <http://www.ihpra.org/navyphysical%20readiness.pdf>. (Last visited January 18, 2011.)
- <sup>87</sup> Texas Education Agency, "Texas Tests Fitness of 2.6 Million Students; Finds Elementary Students Are in Best Shape"; and Texas Education Agency, "Fitness Data," <http://www.tea.state.tx.us/index4.aspx?id=3975/>. (Last visited January 27, 2011.) (Custom queries.)
- <sup>88</sup> Cooper Institute, "FITNESSGRAM Data Results Overview," <http://www.cooperinstitute.org/ourkidshealth/documents/Data%20Overview--3-9-09.pdf>; and "Texas Youth Fitness Study Data Mapping," <http://gis1.design.iastate.edu/texas/>. (Last visited January 27, 2011.)
- <sup>89</sup> Texas Education Agency, "Fitness Data."
- <sup>90</sup> Texas H.B. 1, 80th Leg., Reg. Sess. (2007).
- <sup>91</sup> Texas Comptroller of Public Accounts, "Request for Application: Texas Fitness Now Program," pp. 2-4, [http://www.window.state.tx.us/education/txfitness/tfn\\_guidelines.pdf](http://www.window.state.tx.us/education/txfitness/tfn_guidelines.pdf). (Last visited January 27, 2011.)
- <sup>92</sup> Texas S.B. 1, 81st Leg., Reg. Sess. (2009).

- <sup>93</sup> Internal document supplied by the Texas Education Agency, June 18, 2010.
- <sup>94</sup> Data provided by the Texas Education Agency, August 30, 2010.
- <sup>95</sup> Texas S.B. 891, 81st Leg., Reg. Sess. (2009).
- <sup>96</sup> Texas S.B. 1027, 81st Leg., Reg. Sess. (2009); and Community Food Security Coalition, "Farm to School Legislation: A State-by-State Listing," <http://www.foodsecurity.org/policy/State-by-StateF2Sleg8-11-09.pdf>. (Last visited January 27, 2011.)
- <sup>97</sup> Texas Senate Research Center, "Bill Analysis: S.B. 395 Enrolled," pp. 1-3, <http://www.capitol.state.tx.us/tlodocs/81R/analysis/pdf/SB00395F.pdf> (last visited January 27, 2011); and Texas S.B. 395, 81st Leg. Reg. Sess. (2009).
- <sup>98</sup> Texas S.B. 395, 81st Leg., Reg. Sess. (2009); and Texas Food Policy Roundtable, "Agency Update: Texas Department of Agriculture," <http://txfoodpolicy.org/agencyupdate>. (Last visited January 27, 2011.)
- <sup>99</sup> National Center for Research Resources, "Taskforce for Obesity Research," [http://www.ncrr.nih.gov/biomedical\\_technology/interdisciplinary\\_research\\_centers/taskforce\\_for\\_obesity\\_research.asp](http://www.ncrr.nih.gov/biomedical_technology/interdisciplinary_research_centers/taskforce_for_obesity_research.asp) (last visited January 27, 2011); and Texas S.B. 1, 81st Leg., Reg. Sess. (2009).
- <sup>100</sup> University of Texas School of Public Health at Houston, "Program History," [http://www.sph.uth.tmc.edu/catch/about\\_History.htm](http://www.sph.uth.tmc.edu/catch/about_History.htm). (Last visited January 27, 2011.)
- <sup>101</sup> University of Texas School of Public Health, Austin Regional Campus, "Healthy Habits Are Easy to CATCH! (Coordinated Approach to Child Health)," p. 2, [http://www.sph.uth.tmc.edu/uploadedFiles/Redesign\\_Website/Research/Research\\_Centers/Michael\\_and\\_Susan\\_Dell\\_Center\\_for\\_Advancement\\_of\\_Healthy\\_Living/CATCH\\_National\\_FactSheet-7-9-2010.pdf](http://www.sph.uth.tmc.edu/uploadedFiles/Redesign_Website/Research/Research_Centers/Michael_and_Susan_Dell_Center_for_Advancement_of_Healthy_Living/CATCH_National_FactSheet-7-9-2010.pdf), p. 2. (Last visited January 27, 2011.)
- <sup>102</sup> Flaghouse, "CATCH Works! In the Classroom," <http://www.flaghouse.com/Athletic-classroom.asp>. (Last visited January 27, 2011.)
- <sup>103</sup> E-mail communication from Deanna M. Hoelscher, director, Michael and Susan Dell Center for Advancement of Healthy Living, April 9, 2010.
- <sup>104</sup> Data supplied by Michael and Susan Dell Foundation, September 3, 2010.
- <sup>105</sup> Paso del Norte Health Foundation, "Archived Initiative: CATCH – Coordinated Approach to Child Health," <http://www.pdnhf.org/detail.asp?dt=inits&id=87> (last visited January 27, 2011); and interview with Enrique Mata, senior program officer, Paso del Norte Health Foundation, El Paso, Texas, September 3, 2010.
- <sup>106</sup> University of Texas School of Public Health, Austin Regional Campus, "CATCH Success and History," <http://www.sph.uth.tmc.edu/uploadedFiles/Centers/Dell/CATCH%20History%20and%20Success%2010-12-09.pdf>. (Last visited January 27, 2011.)
- <sup>107</sup> Interview with Jay Horton, professor of internal medicine and molecular genetics, University of Texas Southwestern Medical Center, Dallas, Texas, June 8, 2010.
- <sup>108</sup> Interview with Jay Horton, June 8, 2010; and University of Texas Southwestern Medical Center, "Researchers Pinpoint Where 'Bad Cholesterol Levels are Controlled,'" Dallas, Texas, April 17, 2009, <http://www.utsouthwestern.edu/utsw/cda/dept353744/files/525681.html>. (Last visited January 27, 2011.) (Press release.)
- <sup>109</sup> University of Texas School of Public Health at Houston, "Welcome to CATCH Texas!" <http://www.sph.uth.tmc.edu/catch/>. (Last visited January 27, 2011.)
- <sup>110</sup> University of Texas School of Public Health at Houston, "CATCH," [http://www.sph.uth.tmc.edu/uploadedFiles/Centers/Dell/CATCH%20research%20paragraph%20and%20citations%20\(2\).pdf](http://www.sph.uth.tmc.edu/uploadedFiles/Centers/Dell/CATCH%20research%20paragraph%20and%20citations%20(2).pdf); and "Eat Smart-Child Nutrition Services," [http://www.sph.uth.tmc.edu/catch/curriculum\\_eat\\_smart.htm](http://www.sph.uth.tmc.edu/catch/curriculum_eat_smart.htm). (Last visited January 27, 2011.)



**Texas Comptroller of Public Accounts**

Publication # 96-1428

Revised February 2011

<http://www.window.state.tx.us/specialrpt/obesitycost/>

For additional copies write:

Texas Comptroller of Public Accounts

111 E. 17th Street

Austin, Texas 78774-0100